

PUBLISHED IN CONNECTION WITH THE ANNUAL, AND  
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VOL. I.

FEBRUARY

# THE SATELLITE

OF THE

ANNUAL OF THE UNIVERSAL  
MEDICAL SCIENCES.



A QUARTERLY REVIEW

OF THE MOST IMPORTANT ARTICLES APPEARING IN  
THE MEDICAL PRESS AT LARGE.

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EDITED BY

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PHILADELPHIA:

F. A. DAVIS, PUBLISHER, 1231 FILBERT STREET.

1888.

REGISTERED AT THE PHILADELPHIA POST-OFFICE AS SECOND-CLASS MATTER.



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*Philada., Feb. 1, 1888.*



# The Satellite

OF THE

## ANNUAL OF THE UNIVERSAL MEDICAL SCIENCES.

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VOL. I.

PHILADELPHIA, FEBRUARY, 1888.

No. 3.

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### DISEASES OF INFANCY AND CHILDHOOD.

UNDER THE CHARGE OF

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#### MOULD FUNGI AS A CAUSE OF DIPHTHERIA.

Dr. Michael W. Taylor read a paper before The Epidemiological Society of London, showing all the evidences he had collected from outbreaks of diphtheria. His view was that some common mould-fungi, growing under certain conditions, might originate or transmit diphtheria.

The first set of cases comprised three children in one house, who took diphtheria within a few days of each other. They had not been exposed to infection, nor could the disease be traced to any external conditions, except the state of the bedroom they slept in. The walls, in consequence of leakage, had become sodden with wet on July 12th; on July 22d a fungus appeared on the wet plaster; on August 1st the first case of diphtheria appeared, rapidly followed by two others, in the children who occupied the room. At that time the surface of the wall was covered with aspergillus mould, besides which there was a surprising development of a pileate fungus, a *coprinus*, growing on the wet plaster.

In a second case, in which a child died in three days from diphtheria, there was a great development of *perricillum* moulds in the apartment.

In another case, a young man had diphtheria severely four days after having been engaged in cleaning out a loft in which a number of pigeons were kept, which was full of mould growing on the *exuviae* and *débris* and rotten woodwork.



In a fourth case, four children in the same family were attacked, the only sanitary condition present having been a quantity of fleeces of sheeps' wool, which had been stored for two years within the house, in an adjoining room. Again, there had been three outbreaks of diphtheria in a farm-house, one case in 1879, four cases in 1880, two cases in 1881. Here also wool had been stored within the house, and it was kept in a room which had been successively used by these children as a sleeping apartment.

The author regarded the evidence as pointing strongly to the storage of wool, and to the mould spores and dust proceeding from it, as being the exciting causes of these successive outbreaks of diphtheria.—*British Medical Journal*, April 30, 1887.

#### THE TREATMENT OF DIPHTHERIA BY CHINOLINE.

Pure chinoline is employed by swabbing, or as an irrigation to the diseased surface.

The former is used every two hours in the following solution:—

R. Pure chinoline	.	.	.	.	10 grammes.
Distilled water	.	.	.	.	100 grammes.
Alcohol	.	.	.	.	100 grammes.

For irrigation the following is used:—

R. Pure chinoline	.	.	.	.	2 grammes.
Distilled water	.	.	.	.	1000 grammes.
Alcohol	.	.	.	.	100 grammes.

—*Journal of Laryngology*, etc., August, 1887.

#### A RARE SYMPTOM IN DIPHTHERIA OF THE FAUCES.

In a case of diphtheria in a child of eight months, Werner saw, twelve to eighteen hours before death, black spots on the under lip diffusely spreading and seated on the skin. These spots reappeared if brushed away.

A short time after, the mother, who had been sitting on the bed and cleansing the child's nose and mouth, saw the same black spots appear on the back of her own hands, but could not remove them by brushing. Antiseptics would not remove them either. Some weeks later they were scraped away with a knife. The spots in question were very similar to the black spots produced by burning with gunpowder. No other cases were observed during this epidemic.

As no microscopical examination was made, it is impossible to say whether or not there was a microbe present.—*Journal of Laryngology*, etc., May, 1887.

#### DIRECT TRANSMISSION OF DIPHTHERIA FROM ANIMAL TO MAN.

Dr. Böing-Werdingen reports the case of a daughter of a farmer, 10 years old, who was taken suddenly ill with diphtheria. As scarlet



fever had been for some time prevalent in the neighborhood, it was at first thought the symptoms were due to that disease; but on the third day of the illness Dr. Böing-Werdingen noticed in the yard a chicken moving about in a strange manner. An examination showed it to be suffering from diphtheria in one eye. It was then discovered that the disease had been prevalent on the farm for about six weeks, and that already six chickens had died from it, while twenty more were very ill. On questioning the child it was found she had been accustomed to feed the sick and weakened bird by filling her own mouth with half-masticated food and then placing the beak of the bird therein. Three other children who did not come in contact with the chickens escaped infection.—*Deutsche Medizin Wochenschrift* (quoted in *Archiv. für Kinderheilkunde*, 9 Band., Heft. I. 1887).

#### VINEGAR AS AN ANTISEPTIC IN THE TREATMENT OF DIPHTHERIA.

Dr. Frederick Engelman has used vinegar internally in the proportion of 1 : 4; as a gargle, from 1 : 2, to full strength; as a spray, 1 : 2–3; or, as a local application, with brush or mop, the pure vinegar. Experiments with gelatine cultures have convinced him that vinegar is a more powerful antiseptic\* than carbolic acid in five per cent. solution. It has the additional advantages of being not unpleasant to the taste, and of harmlessness to the mucous membrane. According to Engelman, it is only excelled as an antiseptic by corrosive sublimate.—(Quoted in *Archiv. für Kinderheilkunde*, 9 Band., Heft. I.)

#### DIPHTHERIA IN ANIMALS.

Dr. Turner, in a report on this subject to the Local Government Board, said in the year 1882 a pigeon was brought to him for dissection, in which the whole of the windpipe was covered with a well-marked membrane, which hung loosely in the tube, just as in cases of croup. Pigeons were inoculated in the fauces with this membrane, and a disease of a similar character resulted. Epidemics of diphtheria have occurred on farms where the fowls were dying of a disease seemingly identical with that occurring in pigeons.

A man bought a chicken from an infected farm at a low price, because it was likely to die of this disease. After taking it home, diphtheria shortly broke out in his house. This was the first case in the village.

The author was called on to investigate an epidemic in diphtheria, and found that, in a cottage in which the first cases occurred, a kitten had previously suffered from a throat affection, which was attended by swelling of the neck, foul discharges from the nostrils, and running from the eyes. He also mentions several instances in which cats had apparently become infected from man. Dr. Renshaw has succeeded in inoculating cats with diphtheria from the human subject. Horses also



suffer from sore throat, and the writer mentions an instance where the first case of diphtheria at a farmhouse occurred soon after a horse on the farm had died of *strangles*.

Loeffler, in his investigations on diphtheria, has studied this disease in fowls from a bacteriological point of view, and has shown that it is caused by a particular species of bacilli.—*British Medical Journal*, August 20, 1887.

#### IODOL IN DIPHTHERIA.

Dr. Stembo, of Vilna, tried the local use of iodol in seven cases of diphtheria, two of the cases being very severe. The drug was applied in the following solution:—

Iodoli	.	.	.	.	.	.	.	gr. x.
Liq. vini	.	.	.	.	.	.	.	℥ss.
Glycerini	.	.	.	.	.	.	.	℥iiss.

The patients all recovered after treatment in from four to six days.

The advantages of iodol claimed by the author are its complete harmlessness, its freedom from unpleasant smell or taste, the painlessness of its applications, and the absence of any secondary effects.—*British Medical Journal*, April 9, 1887.

#### OIL OF TURPENTINE IN DIPHTHERIA.

Röse, of Hamburg, has treated fifty-eight cases, with a mortality of five per cent., as follows: He gave oil of turpentine three times a day in teaspoonful doses, mixed with spirits of ether. A teaspoonful of a two per cent. solution of sodium salicylate was also given every two hours.

Externally an ice-bag was used, and gargles of a one per cent. warm solution of chlorate of potash. This treatment gave the following results:—

1. Rapid lessening of the pulse-rate and of the temperature.
2. Rapid alleviation of the subjective symptoms.
3. Shortening of the duration of the illness.
4. No exacerbation of the local process after the first dose of turpentine.
5. Only once was there danger of suffocation, and tracheotomy was resorted to.

The author thinks that penciling the throat, as done in private practice, is generally useless. He uses great caution in pushing the turpentine in anæmic cases and in patients with weak hearts; and excessive cardiac action, from any cause, was carefully treated.

The following food was given: Bouillon, old port wine and milk; ice and aerated fruit-juices were given to quench thirst. The turpentine was discontinued when the patient was free from fever.

In ordinary cases doses of from three to five drachms were used, and no intoxication was seen. In one case paralysis occurred, but the patient recovered under the use of chlorate of potash.—*Journal of American Medical Association*, December 3, 1887.



## SULPHUROUS ACID IN DIPHTHERIA.

Herbert L. Snow says in a letter to the *British Medical Journal* that the tincture of iron and chlorate of potash have no effect whatever upon the diphtheritic membrane, and cases thus treated are in all probability left to run their natural course, little assisted by the supposed remedy.

On the other hand, if sulphurous acid be administered in full and frequent doses, we at once see a rapid disappearance of the exudation, with corresponding improvement in the patient's general condition.

In severe cases a drachm should be given (to an adult) every half hour; in ordinary cases, every two hours; *and proportionately large doses to children*. The only drawback is the choky sensation produced by the vapor; otherwise the mixture (with syrup and water) is rather pleasant in taste.

It is thus necessary to prescribe a large quantity of syrup,—two or three ounces in an eight-ounce mixture. For young children the dose must be given in milk. It is generally very advantageous to add chlorate of potash in order to promote the healing of the ulcer.

No spray or gargle is requisite; but the patient should be directed to gargle a little with the medicine each time it is swallowed,—a task not always possible, however.

## TREATMENT OF DIPHTHERIA BY OXYGENATED WATER.

Hofmokl uses the following in diphtheria, by the gastro-intestinal tract or locally:—

R. Oxygenated water (two per cent. solution). . . 3l.  
Glycerine . . . . . ℥xl.

M. Sig.—A teaspoonful every one or two hours.

This may be given by inhalation. The effects of the medicine are an abundant salivation. The false membranes have in some cases been rejected in three or four days, and in others in six or nine days.

The medicine is a tonic against anorexia.—*Medical News*, November 5, 1887.

## THE EARLY LOSS OF KNEE-JERK IN DIPHTHERIA.

Dr. R. L. MacDonnell, of Montreal, read a paper on this subject, in which he stated that of eighteen severe cases of diphtheria which he had under his care in the Montreal General Hospital, the knee-reflex had been absent on the day of admission in ten cases.

He also related the history of some cases where the absence of knee-jerk was the only symptom of diphtheritic paralysis present, and also where it preceded other nervous symptoms, and remained persistent after they had quite disappeared.

The conclusions arrived at were: 1. That in a large number of cases knee-jerk is lost from the first beginning of the disease, and thus



affords a valuable means of the diagnosis of the nature of the throat affection. 2. That loss of knee-jerk is the first evidence of the disease having attacked the nervous system. 3. Absence of the knee-jerk has no influence on the prognosis.—*Canadian Pract.*, September 1887.

#### AN OUTBREAK OF SCARLET FEVER IN A SURGICAL WARD.

This subject in its relation to wounds, and about which we have so few statistics, is of so much interest and importance that the following outbreak at the Pendlebury Children's Hospital may prove instructive. At the time of the outbreak there were twenty-seven cases in the ward, twenty-three with wounds and four without. Five of the cases with wounds had had scarlet fever previously, one of which was infected. Only one of the cases without wounds was infected, none of these having had scarlet fever previously. Of the six cases with wounds that got scarlet fever, only one was dressed antiseptically; this was the first case infected, and had been operated upon two days previously. The source of the outbreak was not known, and it followed no definite course.

The infection probably takes place through the ordinary channels, and the wound or seat of inflammation, being the weakest part of the organism, is chiefly affected, this taking place from within instead of without, as in the case of ordinary germinal infection. Cases with wounds seem to be more liable to infection than cases without wounds.

Dr. Goodhart, in *Guy's Hospital Reports* for 1879, says "that surgical cases are more liable to be affected than medical cases, and operation cases most of all. At the same time it is probable that the presence of any local inflammation in any part furnishes a bed for the cultivation of the poison, and that it is probably embedded through the ordinary channels of infection, and not through the wound."—R. W. MURRAY, L.R.C.P., M.R.C.S., *Brit. Med. Jour.*, June 18, 1887.

#### CLINICAL NOTES ON SCARLET FEVER.

In the *Birmingham Medical Review*, March, 1887, Dr. Line contributes some clinical notes on scarlet fever based upon 1000 cases. Out of this number there were only fifty-nine deaths from all causes, and complications were responsible for nineteen of these. The mortality under five years of age was 10.5 per cent. From six to sixteen it was only 1.99 per cent. The greatest mortality was between two and four years; younger children usually have a lighter form of the disease. The youngest patient was thirteen weeks old, the eldest sixty-three years.

The most frequent form was scarlatina benigna, with or without complications. These cases required active treatment at first, but the disease never threatened to assume a serious type.



Scarlatina ulcerosa was only moderately frequent, and principally among patients under six. In these cases the tonsils are covered with foul ragged ulcers, which continued after the eruption had subsided. Death did not take place earlier than the ninth day: in some cases it was prolonged to the third week. Cellulitis of the neck occurs in these cases, and often a colliquative diarrhœa sets in; nervous symptoms are prominent during the last few days. The middle ear also suffers more in this form of the disease than in any other, and in almost every case coryza scarlatina was noticed. This rhinitis, while in the acute stage, presents no difficulty; but if it recurs, the discharge is violently infective.

In young children, where there is severe stomatitis or glossitis, the food should be given by the rectum; in older patients the membrane lining the pharynx, with the foul secretions from the tonsils, is often swallowed, producing a slight diarrhœa, which it is not advisable to check. Again, diarrhœa occurs at the end of the first week in cases where the fever is high and the throat symptoms severe: this is best treated by a mild mercurial purge administered daily.—*London Medical Record*, April 15, 1887.

#### SURGICAL SCARLET FEVER.

The cases of so-called "surgical scarlet fever" fall under one of four categories. 1. Cases of congestive erythema, due to vasomotor disturbance. 2. Toxic erythema, like the rashes due to drugs, and depending upon absorption of products of tissue destructions. 3. Septic or pyæmic rashes, as the outcome of general septic infection, and probably due to capillary embolism of micro-organisms. 4. True scarlatina infections, as verified by one or other of the concomitant symptoms,—angina, swelling of submaxillary glands, nephritis, and desquamation.

To call scarlet fever *surgical* the infection must occur at the wound, and the eruption spread from there over the body. The author says that such cases are rare; and he reports only two cases. One case had been treated for rupture of the urethra with extravasation of urine. The rash appeared on the ninth day and spread from the wound over the abdomen and buttocks. It was accompanied by sore throat, and disappeared in a week; but the patient died from cardiac degeneration and acute nephritis. The other case was one of fracture of both femora, and a wound extending into the rectum; was attacked four days after the former case, and recovered with marked desquamation.—HOFFA (*Volkman Sammburg*), *Lancet*, September 3, 1887.

#### ANTIPYRIN IN SCARLATINA AND BRONCHITIS AMONG CHILDREN.

Friedlander, of Russia, reports fourteen cases of scarlatina, all of which recovered under the use of antipyrin in doses of nine grains



once to three times in twenty-four hours. Profuse perspiration, fall of temperature, and refreshing sleep of two hours, followed the use of the drug.

In acute bronchitis nine grains of antipyrin sufficed to influence children under two years of age favorably for twenty hours. Profuse perspiration, lessened cough, sleep, and general improvement followed. During convalescence, half the doses given during the height of the disease were used. In addition, the following was found useful:—

R. Caffein	.	.	.	.	.	gr. $\frac{9}{10}$ to iij
Sodii bicarb.	.	.	.	.	.	gr. xxij <sup>+</sup> to xlv.
Aquæ forniculi	.	.	.	.	.	℥xv.
Syr. ipecac	.	.	.	.	.	℥vijss.

M. Sig.—One-half to one teaspoonful every half hour or every two hours.—*Medical News*, October 8, 1887.

#### MORPHINE AND APOMORPHINE IN WHOOPING COUGH.

Dr. Fedoroff ("Proc. of the Arkhangelsk Med. Soc.;" *British Medical Journal*) states that he has observed good results from the administration, four times a day, of a tablespoonful of a mixture containing two grains of morphine hydrochlorate, one grain of apomorphine hydrochlorate, one-half drachm of hydrochloric acid, and eight ounces of distilled water.

The paroxysms are lessened in number after the first few doses.—*New York Medical Journal*, July 23, 1887.

#### SULPHATE OF QUININE IN WHOOPING COUGH.

Dr. G. A. Mueller, of Chicago, has treated fifteen cases of whooping cough without one failure.

R. Quininæ sulph., gr. xv. Ft. chart. No. x. Sig. One powder at 7, 9, and 11 o'clock A.M., respectively, every alternate day until all have been taken. The quinine may also be given in the fluid extract of licorice or any other favorite. The spasmodic or paroxysmal element is positively subdued after the first day's treatment, which simply leaves the bronchial catarrh to treat. If from exposure the *characteristic* cough returns, one powder is generally sufficient to subdue it.

The above dose is for a child three years old. The author does not claim this treatment as original.—*Chicago Medical Times*, April, 1887.

#### COCAINE IN THE TREATMENT OF WHOOPING COUGH.

Bianché has given cocaine internally for whooping cough with good results. From one and a half grains and four grains to seven and a half and twelve grains in twenty-four hours, given in solution in small, frequently repeated doses.—*Medical News*, May 28, 1887.



## BENZOIN IN THE TREATMENT OF WHOOPING COUGH.

M. Moinard, of the Lenon Hospital, has adopted insufflations by the nose of antiseptic powders, tannin, boric acid, iodoform, benzoin, and to this latter he gives the preference. It was given in fifty cases, obtaining a rapid diminution of the paroxysms. One case was very singular.

A child aged 6 months had been ill for six weeks, having about forty fits a day. Insufflation of benzoin was used, and the child was well in a week.

The following formula is used: Benzoin in powder  $\mathfrak{z}\text{i}$ ; salicylate of bismuth  $\mathfrak{z}\text{i}$ ; sulphate of quinine xx grs.

A little of this powder is inserted into the end of an India-rubber tube and introduced into the nostril; the other end of the tube is taken into the mouth of the attendant and blown through. The powder falls on the desired spot, and the same operation is performed on the other side.

From three to five insufflations are made in the day. No danger or pain attends this method of treatment, and the children offer very little resistance.—*Medical Press*, May 25, 1887.

## NARCEINE FOR WHOOPING COUGH.

This remedy can be relied upon to assuage the paroxysms of whooping cough. As much as one third of a grain may be given to a very young infant in the course of twenty-four hours without danger. The following formula is given:—

R. Narceine	.	.	.	.	.	.	.	gr. ii.
Syr. simp.	.	.	.	.	.	.	.	$\mathfrak{z}\text{iv}$ .
Acid hydrochl.	.	.	.	.	.	.	.	q. s. v. fiat. sol.

M. Sig.—One teaspoonful for young infants.—*American Medical Digest*, May, 1887.

## PURE BENZOL IN WHOOPING COUGH.

Dr. John Lowe recommends the use of benzol in whooping cough after the acute stage. The most notable points in which its beneficial action is displayed are the diminished expectoration and the decrease in the spasmodic nature of the cough. The fluid is so light that it is by no means easy to prescribe it in such a form as to cover the hot, pungent taste which it leaves in the mouth. The following will be found a convenient and not unpleasant formula:—

R. Benzol pærisss	.	.	.	.	.	.	.	$\mathfrak{m}\text{xxxii}$ .
Glycerinæ	.	.	.	.	.	.	.	$\mathfrak{z}\text{iss}$ .
Ol. menthæ pip.	.	.	.	.	.	.	.	$\mathfrak{m}\text{x}$ .
Syr. mori	.	.	.	.	.	.	.	$\mathfrak{z}\text{ss}$ .

M. Sig.— $\mathfrak{z}\text{i}$  every two or three hours.—*British Medical Journal*, October 15, 1887.



## EUCALYPTUS IN WHOOPING COUGH AND IN BRONCHITIS.

Witthauer strongly recommends the use of eucalyptus for whooping cough and bronchitis. In whooping cough, he gives from five to twenty drops of a mixture of equal parts of tincture of eucalyptus and glycerine, according to the age of the child, every three hours. He also uses the following method for inhalation: A small linen bag is made in which is placed a piece of cotton on which ten drops of oil of eucalyptus is put every morning. The bag is tied around the neck of the child so as to be under the shirt, and so the child is in an atmosphere of eucalyptus by day and by night.

In bronchitis fifteen or twenty drops of the tincture are given every three hours. Inhalations are given by placing ten drops of the oil in a cup of hot water, and causing the steam to be inhaled.—*Medical and Surgical Reporter*, November 5, 1887.

## A SPRAY FOR THE TREATMENT OF WHOOPING COUGH.

The following spray is used and highly recommended by Kolover in whooping cough:—

R. Quininae sulph. . . . .	3i.
Acid sulphur dil. . . . .	gtt. xxx.
Aquæ . . . . .	3vss.

This may be used every two hours for the first three or four days, and every three hours for the remainder of the first week, after which it will be unnecessary.—*L'Union Médicale*, October 18, 1887.

## TREATMENT OF WHOOPING COUGH BY NASAL INSUFFLATIONS OF BORIC ACID.

Dr. George Holloway adopts the following treatment:—

The patient is confined to one room for a week or ten days, each nostril is insufflated every three hours during the day, and once during the night, with from two to three grains of finely powdered boric acid. No difference should be made in the diet unless some special circumstance calls for it. At the end of ten days allow the child to go out in favorable weather. An ordinary insufflator of small size may be used. Twenty cases reported by the author were cured in three weeks without other treatment.—*British Medical Journal*, October 15, 1887.

## DISINFECTION TO BE USED IN CASES OF INFECTIOUS DISEASES.

The best way to disinfect the house is by washing the walls, baseboards, and furniture with a  $\frac{1}{1000}$  solution of sublimate, and then with water and soap. Afterwards it should be freely ventilated. The best means for disinfecting beds, clothing, etc., is heat; the articles should be subjected for a long time to a temperature of 100° to 140° C.

The sick room should be thoroughly ventilated, and towels, bed-linen, etc., washed in a  $\frac{1}{2000}$  solution of sublimate before they are used again. Wagons of transportation should also be disinfected after each time of use.



All attendants should wash hands, nails, beard, and hair with a five per cent. solution of carbolic acid, or a  $\frac{1}{2000}$  solution of sublimate. Food should not be kept in a sick room.—*Archives of Pediatrics*, February, 1887.

#### ARSENIC POISONING AND PRESENCE OF THAT POISON IN THE MILK OF NURSES.

A man tried to poison his wife who was at the time nursing a two-months'-old baby. The woman was very ill with profuse vomiting and diarrhoea. The child presented the same symptoms and died in forty-eight hours. The exhumation of the child's body took place several months later, and was found almost entirely converted into adipocere.

The skin was intact and of a grayish-brown color. The chemical analysis revealed a considerable quantity of arsenic,—about five milligrams, the child only weighing two kilograms. The linen around the body and the inside of the coffin were coated with arsenic, whereas the outside and neighboring soil was found to be entirely free.

In order to verify this instance MM. Brouardel and Pouchet administered Fowler's solution in increasing doses (from two to twelve drops) to several wet-nurses. The women did not show any evidences of arsenical poisoning, although arsenic could easily be found in the milk. When Fowler's solution is given to nursing women they become sick and their children usually die, and the chemical analysis reveals arsenic in their bodies. From these researches we find that the administration of any medicament containing arsenic is dangerous to nursing females.—*Weekly Medical Review*, July 9, 1887.

#### THE IODIDE OF POTASH IN BRONCHO-PNEUMONIA.

Dr. Zonnis highly recommends the iodide of potash in cases of broncho-pneumonia in children from six months to five years of age. The following shows the results and action of the drug:—

1. The iodide of potash is more efficacious in the acute stage than when the disease has advanced. Its action is very doubtful in cases of measles and whooping cough.

2. It is particularly useful with feeble and strumous children. Its usefulness is very much greater with children from one to five years than in younger children.

3. The temperature is often lowered one or two degrees in two or three days; it greatly diminishes the frequency of the respiration, softens the cough, and makes expectoration easier. The percussion shows at the same time that all of the physical signs are diminished.

The cure of broncho-pneumonia is obtained much more quickly by the use of the iodide of potash than any other drug, especially when it is given in the beginning. The drug should be given in solution in doses of three to five grains, according to the age of the child.—*Maladies de l'Enfance*, August, 1887.



## THE ADVANTAGES OF INTUBATION OF THE LARYNX.

Dr. E. Fletcher Ingals summarizes the present condition of the question as follows:—

1. Intubation may be quickly and easily performed, and with but little danger.

2. Friends readily consent to the procedure.

3. There is no necessity of tedious after-treatment, as the tube is kept clear by the respiratory efforts.

4. The results so far are practically as good as those of tracheotomy at all ages, and apparently better in very young children.

5. To secure the best results, great care must be taken to prevent the entrance of foreign substances into the trachea.

6. At present, with O'Dwyer's tubes, the most successful plan is to absolutely prohibit the deglutition of fluids while the tube remains in the larynx. Small pieces of ice may be sucked to allay thirst; soft solids may be swallowed, and fluids may, if necessary, be supplied by enemata, or the tube may be removed to feed the patient, and then be reintroduced.

7. Tubes with smaller heads, designed to rest on the vocal cords, have not been used often enough to speak positively about them. If experience proves that they do not often slip into the trachea, and that they do not injure the vocal cords, they will be especially useful; for they will nearly overcome the difficulty in deglutition, and patients wearing them may eat and drink at pleasure, excepting when paralysis or some other result of the disease prevents closure of the epiglottis.

8. Medical treatment should be carefully attended to after intubation, and no effort should be spared to prevent extension of the disease to the bronchial tubes, or to relieve the dyspnoea which it occasions. Successful after-treatment depends largely upon the judicious and timely use of suitable expectorants, and respiratory and cardiac stimulants.

9. Though short tubes may be used with good results, in some cases, the danger of their becoming filled with pseudo-membrane is so great as to render long tubes preferable.

10. Intubation may and should be practiced early, and it does not preclude subsequent tracheotomy.

11. For serious cases of spasmodic croup, and for œdema of the glottis, this will prove a most useful procedure.

12. For the treatment of chronic laryngeal stenosis, this method will, doubtless, be of value.—*N. Y. Medical Journal*, July 23, 1887.

## INTELLECTUAL OVERWORK AND SEDENTARY LIFE IN SCHOOLS.

Dr. Brouardel of the Paris Academy of Medicine said that students did not only lose their health from too much work and sedentary



life, but also from the very conditions of life in large cities. When they are young, boys in large towns are usually bright, but in a few years, when called upon to do much intellectual work, they fall away and end by an arrest of development of intellect, as well as *physique*. In many cases the genital organs do not develop.

At first they astonish their families by the aptitude they have for study; but as puberty approaches a great change takes place, and they generally arrive at nothing of importance. Dr. Brouardel is much opposed to boarding-schools in cities where the pupils have little chance of out-door exercise. Professor Peter spoke on the same subject, and called attention to the headache from intellectual overwork. Many of these children complain of headache, and are told that it is laziness. The author spoke of cases where the children could take part in conversation, but the moment they went to books the headache returned, and very often with epistaxis. The writer condemns the closely-confined air of schools and its action in producing tuberculosis.—*Philadelphia Medical Times*, August, 1887.

#### RESEARCHES UPON THE CALORIMETRY OF SICK CHILDREN.

At a recent meeting of the Académie des Sciences, M. P. Langlois communicated the results of his researches upon the calorimetry of sick children. His aim was to determine, by the aid of M. Ch. Richet's calorimeter, whether the high temperature of fever is due to a greater production or a diminished loss of heat.

He ascertained that, in chronic diseases in which the temperature is normal or subnormal, the production of heat is diminished, while in pyrexial diseases there is a sensible increase of heat. The thermogenesis and the temperature appear to be in direct correlation in children's diseases.—*British Medical Journal*, June 7, 1887 (Paris Letter).

#### THE ACTION OF THE SULPHATE OF THALINE.

Dr. Steffen recommends this as a valuable agent in diseases of children; being tasteless, children will readily take it in a watery solution. It never excites either diarrhœa or vomiting. Its action is usually manifest within an hour after it is given, and the resulting defervescence usually lasts three or four hours. The ordinary dose is from five to twelve centigrammes, and not more than two doses are required in the course of twenty-four hours.

The temperature is reduced from two to four degrees by its use. Its action is most satisfactory in such diseases as typhoid fever, bronchopneumonia, and chronic phthisis. The results have been less marked in scarlet fever, measles, and diphtheria. The author has never seen collapse follow its use.—(*Rev. Mens-des Mal. de l'Enf.*) *Archives of Pediatrics*, June, 1887.



**EMPHYEMA: ADVANTAGES OF ASPIRATION AND EARLY INCISION IN CHILDREN.**

Dr. L. Emmet Holt, in a paper read before the New York Academy of Medicine, says that the prognosis of empyema is much better in children than in adults. In adults, empyema occurs commonly in tuberculosis, which is not the case in children. Spontaneous absorption takes place very rarely, and he has found that the chances of recovery in children suffering from empyema by nature's unaided efforts are not very great.

The indications for treatment are to get rid of the pus by the easiest, safest, and most thorough means, and as early as possible. Puncture with the trocar and siphon-drainage is an incomplete method, and cannot be easily carried out in children. Aspiration, with ordinary skill and clean needles, is free from danger when the fluid is not removed rapidly, so that gradual expansion of the compressed lung is favored.

The fluid after one or two aspirations becomes serous and is absorbed readily. But still there are some objections. Not all the fluid can be removed. One sac may be emptied when another is not touched; whereas by incision and insertion of the finger the septa can be broken down. In a case of large effusion, one aspiration may be done as a preliminary step to a cutting operation. In all other cases a free incision should be made as early as possible.—*New York Medical Journal*, July 23, 1887.

**HABITUAL CONSTIPATION IN CHILDREN AND THE METHODS OF TREATMENT.**

Dr. W. H. Day, *Med. Press and Circular*, May, 1887, says:—Most cases are due (1) to a sluggish state of the muscular coat of the intestine; (2) to a diminution of secretion from the mucous membrane or the liver; and (3) to improper dietary. Children are variously affected by constipation; the bilious and pléthoric require a daily evacuation, or the health suffers; whilst the neurotic, eating similar food, may have no evacuation for days together without any inconvenience. Prolonged constipation is apt to lead to disease of the cæcum, chronic inflammation and thickening of the intestinal walls, dilatation of the tube, and occasionally perforation of the gut. Highly nutritious food, by not furnishing any residuum to be carried into the intestines, is conducive to constipation. In treatment the author refers to the importance of bringing about regular action of the bowels by a voluntary effort every morning, whether the desire be present or not; to the value of enemata, when the color is torpid and the return blocked, and of proper diet. Among drugs, strychnia and belladonna—by imparting tone to the bowels, relieving spasms, and lessening flatulence—are recommended. Nitric acid in some cases is advocated. The author has much faith in an occasional mercurial purgative in con-



stipation from deficient secretion of bile, but is opposed to its use in rickety children. Saline aperients are useful in children of full habit. Change of air and exercise are calculated to assist the viscera in the performance of their functions, and massage is a powerful remedy in chronic constipation, being, when conducted by a competent person, both pleasant and soothing to the child.—*Lancet*, June, 1887.

#### TREATMENT OF CROUPOUS PNEUMONIA BY MEANS OF INUNCTIONS OF GRAY OINTMENT.

The authors have been treating all cases of pneumonia with inunctions of gray ointment. In the years 1883 and 1884, 32 patients with this disease were treated in the authors' wards in the hospital at St. Petersburg with only 2 deaths; in the other wards of the hospital 188 cases were treated during the same period by other methods of treatment with 29 deaths. Thus, the mercurial treatment during the given period resulted in a mortality of 6.2 per cent.; other methods of treatment in a mortality of 31.4 per cent. The inunctions were practised as soon as the diagnosis was made,—the extremities, the abdomen, and the sacrum being the seat of the applications. Applications of other kinds were made to the chest. The quantity of the ointment used was one drachm, morning and evening. A mouth-wash of chlorate of potash solution was used from the beginning of the treatment; but in spite of this the gums and the salivary glands became inflamed in some cases. After the crisis occurred the inunctions were only made once a day. In addition to this treatment, other suitable agents, as occasion demanded, were used.—Barthel and Moritz, of St. Petersburg. *The Archives of Pediatrics*, August, 1887.

#### TREATMENT OF TETANY.

Dr. Cheadle (*Lancet*, May 14, 1887) summarizes the objects to be sought in the treatment of tetanoid laryngismal convulsive disorder of childhood as threefold: (1) to relieve dangerous convulsive seizures when they occur; (2) to ward off the recurrence of these attacks; and (3) to remove the constitutional rachitic state which predisposes to them.

To ward off the attacks, chloral and bromide should be given. Each is good, but they act best together. They have a wonderful power of (chloral especially) preventing general convulsions.

They must be given in full doses and at regular intervals, so that the system is constantly under their influence until the tendency to spasm permanently declines. For a child of six months half a grain of chloral to one or two grains may be given, with three grains of bromide every four hours; for one a year old, from one to three grains of chloral, with five grains of bromide, every four or six hours; and so on in proportion.



Larger doses may be given should urgent symptoms arise. In a severe case of tetany in a boy of two years, two grains of chloral and five grains of bromide every four hours failed to produce improvement; then the author gave one-twelfth to one-fifth of a grain of Calabar bean with good effect. Thus gaining time by keeping the nervous system in safe quiescence, we proceed to treat the rachitic state,—the evil condition which underlies and is the prime source of all. For this purpose the writer gives milk, cream, raw meat, infant's food, codliver-oil, and syrup of lactophosphate of lime, or of lime and iron. A grave error-pervading practice in these cases is that of adopting a spare and lowering diet.—*Cinn. Lancet-Clin.*, July 9, 1887.

#### THE TREATMENT OF SUMMER DIARRHŒA WITH THE SULPHO-CARBOLATE OF ZINC.

Dr. William F. Waugh, of Philadelphia, has treated thirty cases of summer diarrhœa with the sulpho-carbolate of zinc without one death. These cases included catarrhal gastro-enteritis, inflammatory entero-colitis, and true cholera infantum. The zinc salt was given in doses of one-sixteenth grain every two hours, with one to five grains of bismuth. As the remedy was well borne, the dose was increased to one-fourth grain for a child in its second summer. Its first effect was to stop the vomiting. The stools became less offensive, although in some cases quite copious and frequent. In these cases an enemata of flaxseed tea, containing five grains of the sulpho-carbolate and a half a drachm of bismuth, was given. This was effectual in all cases. The fever was treated with antipyrin in doses of one to two grains, which also seemed to have a disinfectant action upon the stools. The sulpho-carbolate of zinc has the advantage over naphthalin and salicylic acid of being more palatable and less irritating to the stomach.—*The Philadelphia Medical Times*, August, 1887.

#### HYDROCHLORATE OF COCAINE IN CHOLERA INFANTUM.

Dr. Her (Ottoessa) extols the above drug in cholera infantum. He has used it successfully in cases where the limbs were cold, the eyes sunken, face cyanotic, and the pulse very rapid. He gives a centigramme every hour or two hours as indicated.—*Canadian Pract.*, July, 1887.

#### A STUDY OF THE PRINCIPAL OBJECTIONABLE FEATURES OF INTUBATION.

Dr. Charles E. Sajous, in a paper read before the American Laryngological Association, gives the following objections to intubation of the larynx:—

1. Obstruction of the tube by detached membrane; due to the limited diameter of its anterior.
2. Crowding down of loose membrane during the introduction of the tube; due to its inordinate length.



3. Passage of food through the tube into the trachea; due principally to its weight.

4. Momentary arrest of respiration during the introduction of the tube, due to the presence of the obturator.

5. Liability of the tube to be coughed out; due principally to the limited diameter of the interior.

6. Slipping of the tube into the trachea; due to its weight and to the conformation of its head.

Then the author showed a set of tubes which he had designed, and claims the following advantages over the old style:—

1. They have almost the same breathing space as in the normal larynx, thus preventing as much as possible obstruction by detached membrane.

2. The comparative shortness of the instrument, and the early separation of the lower portions of the valves, reduce greatly the danger of crowding down loose pseudo-membrane.

3. The light weight of the instrument and the shape of the head avoid interference with the act of deglutition.

4. Separation of the valves a short distance above their tips, when closed, enables the patient to breathe freely while the instrument is being introduced.

5. The fact that the force of the air-current is exerted in the centre of the instrument, and has sufficient space to pass freely, renders ejection during cough almost impossible.

6. The breadth of the head, the facility with which it can be grasped by the forceps, combined with the lightness of the instrument, make it impossible to force it into the trachea without fracturing the thyroid cartilage.—*New York Medical Journal*, October 23, 1887.

#### CONTRIBUTIONS TO VACCINIA.

Drs. Warlomont and Hugues have contributed to the Royal Academy of Medicine of Belgium (quoted from Proceedings of 1886 in *Archiv. für Kinderheilkunde*, 9 B and I Heft., 1887), their experiments regarding the generally accepted opinion,—1. That horses and cattle produce vaccinia *de novo*, and (2) that horse and cow-pox and variola are due to the same virus as human variola.

They sum up their conclusion as follows:—

1. Neither horses, nor cows, nor any other animals, can originate vaccinia; for every animal must first be inoculated, or in some way acquire vaccinia, in order to develop the disease.

2. The original germ or virus of vaccinia, as regards horses and bovine animals, is no other than that of variola, which has been introduced into the system of the animals and undergone there an alteration, the result of which is the disease known as vaccinia.



3. This alteration is more marked in cows than in horses; consequently the horse-pox resembles variola more than cow-pox.

4. The horse affords a poor field for the culture of vaccinia; but that is no reason for rejecting animal vaccination; for in vaccination a weaker virus is required than the system of the horse can produce.

5. The artificial impregnation of horses with variola or vaccinia by injection or inoculation appears, as in the case of cows, to occur without any outward manifestations. The protection, consequently, which these animals enjoy is due to the fact that they have already acquired vaccinia in some way or other, without manifesting any outward signs of the disease. As the horse reacts so feebly to inoculation, it is not a good subject for control experiments. The authors undertook a series of experiments with cattle, and, after 19 experiments with reference to those of the horse, came to the following conclusions:—

1. The identity of horse and cow-pox and human variola has not been proved by experiment.

2. The system of the horse is not fitted for the culture of vaccinia.

3. The immunity to vaccination in cattle is due to the fact that the virus, while entering the veins and lymphatics, produces no outward symptoms.

4. This protection exists especially if, after subcutaneous injections into the connective tissues, a swelling occurs at the site of the injection, which is not traumatic in character, and which may spread widely over the body, and whose contents do not possess the peculiarities of vaccine virus.

5. The immunity produced by inoculation with vaccinia is also afforded by the foot and mouth disease (*co-calto*).

#### THE INCUBATION PERIOD IN SMALL-POX.

Prof. Eichhorst, in *Deutsche Med. Wochenschrift* 3, 1886 (quoted in *Archiv für Kinderheilkunde*, 9 Band., I Heft., 1887) reports the case of a physician practicing in a neighborhood free from variola, who visited his father while sick from that disease. He remained three minutes by the bedside, but did not come in contact with the patient. Before returning home he was thoroughly disinfected with chlorine. Exactly 9 days and 8 hours after the visit the first symptoms of variola manifested themselves. Two other patients, students, were infected under similar circumstances, visiting friends at a distance 9 days and 8 hours after symptoms of small-pox appeared.

#### PROPEPTONURIA IN MEASLES.

Dr. Loeb, of Frankfort, reports a case of measles in an eight-years' old child, who, on the eighth day of the attack, when conva-



lescence had commenced, became suddenly drowsy and apathetic, refusing all food. There was no fever. The urinary secretion was diminished. The latter fluid had a specific gravity of 1015, and the proper tests revealed a marked amount of propeptone. Nitric acid threw down a copious precipitate, which heat and the further addition of acid dissolved. Bailing alone produced no results. No casts could be found. In two days the child was quite well, and the propeptone had entirely disappeared from the urine. At the same time there was a copious deposit of uric acid salts. In connection with the above, Dr. Loeb calls attention to the fact that the urine of measles, especially at the crisis, answers to the diazo-reaction, *i. e.*, by the addition of diazo-benzol-sulphonic acid (sulpho-diazo-benzol), or the diazo combination of sulphanitic acid (*i. e.*, by mixing sulphanitic with nitric acid, or muriatic acid and sodium nitrite, and then adding an excess of ammonia), a beautiful carmine or scarlet color is observed. It is not settled to what bodies this reaction is due; but since, according to Petri, peptone causes a similar reaction, Dr. Loeb thinks it quite possible that the presence of small quantities of propeptone in the urine of measles may account for the diazo-reaction in that disease.—*Archiv. für Kinderheilkunde*, 9 Band, I. Heft, 1887.

#### ICTERUS NEONATORUM.

According to Silbermann, the icterus of the new-born results from absorption of the biliary coloring matters due to an engorgement of the bile-ducts from their compression by the congested branches of the portal vein, capillaries, and small hepatic veins. This venous engorgement is brought about, not by respiratory and circulatory disturbances, as taught by Birsch-Hirschfeld, Hewitt and Weber, and others; but through the influence of a blood ferment (fibrin ferment), arising from a destruction of red-blood cells, which takes place directly after birth. Silbermann lays special stress upon the influence of the blood ferment, and proves experimentally that by the injection of certain substances, such as blood alternately frozen and thawed, toluylen-diamin, etc., an engorgement, with great retardation of the circulation, arises in the abdominal, especially the portal and renal, veins and their branches. Along with this engorgement there is a profound alteration in the blood itself. The plasma is filled with fragments of blood-cells, poikilocytes, corpuscles containing red corpuscles, nucleated red corpuscles, macro- and microcytes, phantom corpuscles, and white corpuscles which have undergone a viscid metamorphosis, and, as a result, cling to the sides of the vessels. A similar state of things was found in the blood of living children suffering from icterus, and on post-mortem examination. As a result of this slowly circulating blood, laden with free hæmaglobin and disintegrated blood cells, large amounts



of blood-coloring matter are stored up in the liver cells, and a consequent abundant formation of bile occurs. Why this destruction of blood cells should occur Silbermann does not explain; but he quotes Hafmeier, who says that after birth, owing to the increased functional activity of the new organism, large numbers of blood cells are consumed. That the jaundice does not occur in every infant is due to the fact that the number of bile-ducts compressed, as well as the amount of pressure, differs greatly in different children. From his extended researches he draws the following conclusions:—

1. Icterus neonatorum is a jaundice of resorption, *i. e.*, of hepatogenous origin.

2. The biliary engorgement has its seat in the interlobular gall-ducts and their finer ramifications, which are compressed by the congested branches of the portal vein and blood capillaries.

3. An alteration in the hepatic circulation, occurring shortly after birth, is the cause of this vascular congestion, which is itself induced by, and is a local manifestation of, a general change in the blood plasma.

4. This change in the blood consists in the development of a blood ferment (fibrin ferment), arising from a destruction of the red-blood cells taking place immediately after birth.

5. The weaker the child the more intense the jaundice; for in such children the destruction of the blood corpuscles and, as a result, the intensity of the blood ferment is more marked than in robust ones.

6. By the destruction of numerous red-blood corpuscles there results abundant material for the formation of the biliary coloring matter which, under the influence of the blood ferment, accumulates slowly and in large quantities in the hepatic vessels.—*Archiv. für Kinderheilkunde*, 8 Band, VI. Heft, 1887.

#### ACETONURIA IN CHILDREN.

Baginsky has an elaborate contribution to this subject, induced by the conclusions of Von Jacksch, that diaceturia is frequently observed in children as an expression of an auto-intoxication; and that probably a part of those processes known as eclampsia infantum is to be considered as an expression of an auto-intoxication, manifested by the appearance of diacetic acid in the urine. Von Jacksch further showed that from urine containing diacetic acid acetone could be obtained. From these conceptions one would suppose that in a disease like rachitis, which is so frequently attended by various nervous phenomena, such as laryngospasm and convulsive attacks, there would exist a large amount of acetone in the blood, and a corresponding excretion by the urine. It was from these points of view especially that Baginsky's investigations were undertaken. As diacetic acid can only be obtained from fresh specimens of urine he limited his studies to the formation and excretion of acetone.



The reactions employed for the detection of acetone were as follows:—

1. *Lichen's Reaction*.—If to one centimetre of an aqueous solution (five per cent.) of acetone, first made alkaline with liq. sodæ, is added a small amount of a solution of iodine and iodide of potash in water (Friedlander's formula for this "Iodiod Kalilösung" is iodine 1.0; potass. iodidi 2.0; aq. destillat. 50.00), there results immediately a yellow precipitate of strong iodoform odor, which either at once separates as six-sided plates or six-pointed stars, or only does so distinctly after the precipitate has been dissolved in ether and the latter allowed to evaporate. This reaction is obtained promptly by 0.1 centimetre of a five-per-cent. solution or with the presence of 0.005 of acetone. Other bodies give this reaction, but the only one likely to be present in the urine of children is alcohol, and that only in small amounts. A solution of absolute alcohol containing 0.005 of alcohol responds to this reaction only after long standing, and the crystals can only be detected by the microscope, while the acetone reaction occurs promptly and abundantly.

2. *Legal's Reaction*.—If to one centimetre of an aqueous solution (five per cent.) of acetone, first mixed with a small amount of liq. sodæ, is added a freshly prepared solution of nitroprussia of sodium, there occurs a beautiful carmine red coloration, which in a few moments passes into a yellowish-brown, on the addition of a few drops of acetic acid the carmine color returns for a moment; but, on the further addition of acid, disappears as quickly. If the solution is then boiled, a precipitate of Berlin blue is thrown down. This test answers to the presence of 0.005 of acetone; but the colors are not distinct and disappear rapidly—so rapidly that the return of the red coloration is so momentary as to require the closest attention to observe it.

3. *Reynold's Reaction*.—If to one centimetre of an aqueous solution (five per cent.) of acetone a few drops of a solution of bichloride of mercury is added, and then liq. sodæ in excess, there occurs a precipitate of oxide of mercury. If this precipitate is then shaken, and the mixture cautiously filtered, so that the filtrate appears perfectly clear, and to the liquid so obtained a little sulphide of ammonium is added, by allowing it to pour slowly down the sides of the test-tube, there occurs at the point of contact of the two fluids a black ring of sulphide of mercury. This test responds to 0.1 centimetre of the solution or to 0.005 of acetone. In the same concentration alcohol produces no reaction.

When any suspected fluid responds to these three tests, applied one after the other, the presence of alcohol or acetone is assured. The iodoform reaction of Lichen responds more quickly and abund-



antly to acetone than to alcohol; so that in the rapidity of the reaction and the abundance of the precipitate, an estimate of the presence of one or the other of these substances can be made. In testing for acetone, the urine, contents of the stomach, intestinal cause or other suspected fluid was not used, but a distillate obtained therefrom after previous acidifying with muriatic acid. Urine as fresh as possible was employed; but alkaline urine a few days old was not rejected, even in summer, as urine to which acetone had been added, and then allowed to decompose, responded promptly to the tests.

It is impossible here to give even a resumé of Baginsky's extended and elaborate experiments, the results of which he sums up in the following propositions:—

1. Acetone occurs in the urine of healthy children under perfectly normal circumstances, but in very small amounts.

2. Acetone occurs in large amounts in the urine of children suffering from various febrile disorders, as pneumonia, measles, etc.

3. The amount of acetone corresponds to the height and duration of the fever, and disappears with its decline.

4. The formation of acetone occurs, doubtless, from the destruction of nitrogenous matters in the organism; for its excretion is increased in dogs by a dietary rich in nitrogen, and by the continuous administration of carbohydrates it can be made to disappear. Investigations at the bedside give the same results.

5. The amount of acetone in the urine of children suffering from convulsive attacks (suddenly occurring epileptiform convulsions) is greatly increased. The source of this acetonuria cannot be attributed to the administration of chloral hydrate.

6. The obstacle to respiration induced by eclamptic attacks cannot be regarded as a cause of the acetonuria, as animals free from fever, and subsisting upon a non-nitrogenous diet, do not develop acetonuria under the influence of artificial dyspnoea.

7. The source of this acetonuria is not to be attributed to fermentation processes in the intestinal canal; at least, the amount of acetone present in the lactic acid fermentation is insignificant.

8. Neither in the fæces or gastric contents of dyspeptic children can acetone be demonstrated. (There was a single exception to this statement: an infant sick for five months with indigestion and convulsive attacks. Not only the urine, but the green, slimy fæces contained large amounts of acetone.)

9. Acetone cannot be regarded as the cause of the convulsive attacks of children; for in those diseases where convulsive attacks are most apt to occur, acetone is not found in the urine, or only in traces.

10. The supposition that there is a relation between acetonuria



and rachitis has not been sustained by clinical and experimental investigations. Animals fed for a long time on acetone do not develop rachitis.

11. The long-continued feeding of animals with acetone has also failed to produce nephritis, contrary to the statements of Albertoni and Pisenti.

In a postscript to this paper Baginsky announces the discovery by him that the bacterium described by Escherich as the "B. Lactis Aërogenes," develops a substance during the fermentation of milk-sugar, which in every respect resembles acetone in its chemical reactions.—*Archiv für Kinderheilkunde*, 9 Band, I. Heft, 1887.

#### TREATMENT OF CHOREA.

Prof. Nothnagel treats chorea as follows:—1. Arsenic is used in the following formula:—R. Sol. Fowleri. M. 75. Aq. destillat. M. 225. s. 4 drops t. d. After a few days the dose is increased gradually to 12 drops t. d. and then slowly diminished to the first dose. It should not be continued for more than 6 or 10 weeks. 2. Patients are wrapped once or twice daily in sheets dipped in water of a temperature of 22–20° (68–70°F.) and allowed to remain therein from three to fifteen minutes, according to their sensations. They are then lightly dried, without rubbing. 3. The constant current is used. Soft, wide electrodes are employed, and the current passed either from the forehead to the nucha, or from one ear or temple to the other. At first but two elements are used, the séance lasting from one-half to one minute. The electrodes are moved slowly over the skin, whereby the current is weakened. The neck and spinal cord are also galvanized, either from above downwards or vice versa. From four to five elements are used, and the electrode not moved. No interruptions are made. By these methods Nothnagel has succeeded in curing the most difficult cases. For the insomnia the strongest narcotics—morphia, chloral and chloroform—are given.—*Allgemeiner, Wiener Med. Zeit.* No. 110, 1886. *Archiv für Kinderheilkunde*, 8 Band, VII. Heft, 1887.

#### ALTERATIONS IN THE URINE AND ITS CONSTITUENTS IN THE TYPHOID FEVER OF CHILDREN.

The almost total absence of data concerning the quantitative estimation of the urine and its constituents during the different periods of typhoid fever in children, led Jacobowitsch to investigate the subject. His observations extend over the whole period of the disease, from the appearance of the first symptoms to complete recovery. On this account only ten cases were studied. All of these were severe, lasting four weeks. The youngest was 5½, the eldest 14 years old.

1. The ordinary opinion that the quantity of urine is greatly diminished during the whole period of increased temperature was not



substantiated by Jacobowitsch's observations, which show that the daily amount of urine does not correspond to the height and duration of the fever; that by low temperature it can be decreased, and vice versa; and that by the highest temperature during the first two weeks it may deviate little from the normal; while during the fourth week, with a temperature near or about normal, it may be much below that of health.

2. The color of the urine was mostly dependent upon the amount excreted: the smaller the quantity, the deeper the color, and vice-versa. Yet in several cases excreting but half the normal quantity the color was pale. The reaction was weak or acid according to the density of the urine.

3. As regards the specific gravity the common idea that it stands in inverse proportion to the amount of urine passed has not been borne out by the investigations. In the majority of cases it did not markedly decrease with increase of the urine. In two girls, however, extremely ill, passing large quantities of urine the specific gravity was correspondingly high.

4. Albumen was not present in any of the cases.

5. As to the secretion of urea, the cases observed can be divided into two groups:—1. Including those with large excretions of urea during the first week, gradually diminishing to the end of the disease. 2. Those with diminished amount at first, followed by a gradual increase to the close of the attack. The amount of urea, consequently, did not stand in relation to the height of the fever.

6. The uric acid was, in the majority of cases, greatly diminished during the first week. During the succeeding weeks it fell gradually until recovery occurred. The excretion of uric acid appeared, therefore, to depend more on the height of the temperature than that of urea.

7. In all cases the chlorides were greatly diminished during the whole course of the disease. They were less in the second than in the first week; in the third they were greatly increased; while during the fourth week they in several cases exceeded the normal.

8. Finally, in considering the excretion of phosphoric and sulphuric acids, the cases also can be divided into two groups: 1. Those cases with increased quantity in the beginning of the disease, gradually diminishing to the close; 2. Those showing the contrary.

From these observations Jacobowitsch concludes that the alterations in the excretion of urine and its constituents in the typhoid fever of children is not due so much to the severity of the attack and height of the fever as it is to the amount of the typhoid poison circulating in the blood.—*Archiv für Kinderheilkunde*, 9 Band, I. Heft, 1887.



## PRACTICE OF MEDICINE.

UNDER THE CHARGE OF

J. C. WILSON, M. D.,

Attending Physician to the Hospital of the Jefferson College, Philadelphia.

### EHRlich'S TYPICAL URINE TEST.

Jacobi gives the correct formula for this test, concerning which, in consequence of the wide publication of a formula marred by a typographical error, much confusion has arisen. The formula is as follows:—

#### Solution No. 1.

Sodium Nitrite,	.	.	.	.	.	1 part.
Aquam Destillat,	.	.	.	.	.	200 parts.
M.						

This solution is liable to become decomposed after four days.

#### Solution No. 2.

Acid. Sulfanilic,	.	.	.	.	.	5 parts.
Acid. Hydrochloric conc. pur.,	.	.	.	.	.	50 “
Aquam Destillat.	.	.	.	.	.	1000 “

Solution No. 3 is prepared by mixing of Solution No. 1, 1.2 parts, and of Solution No. 2, 50 parts.

To make the test, mix Solution No. 3 and the suspected urine in equal quantities, and slowly add aq. ammoniæ. As neutralization is neared a deep maroon color appears. Control testing with normal urine is advisable.—*Journal of the American Medical Association*, December 10, 1887.

### SMALL-POX AND RAGS AT PAPER MILLS.

Dr. Parsons, of the Local Government Board Medical Staff, has lately been making inquiry into small-pox at Ivybridge, in South Devon. The cases that occurred were all in the persons of girls who worked in the rag-loft at the paper-mills at that place. The patients had worked on “outshots,” *i. e.*, soiled white rags, and none of them had been revaccinated. Dr. Parsons gives a succinct account of previous outbreaks at the Ivybridge Mills in 1881, 1883, and 1884, in which he shows the connection between rag-working and small-pox, and then proceeds to demolish objections which had been made to the hypothesis of infection by means of rags; he particularly demonstrates a greater incidence upon rag-workers at the Ivybridge mills than upon persons employed in other parts of the mills. He then goes on to speak of the sources of rags and the process of their manufacture into paper, and states that the comparative infrequency of rag infection is to be explained by the facts that it is only the white rags which are to be made up into fine paper, to which any danger attaches; that



before the rags come to the mills they have been sorted and exposed to the air for months; and, finally, that there is danger only in the preliminary stages, not during the chemical treatment. There are no available means known whereby infected rags can be recognized, and much of the opprobrium under which foreign rags suffer is shown to be unmerited. Among precautions against rag-infection, Dr. Parsons includes (1) vaccination; (2) ventilation of work-rooms and unpacking of the bales of rags in the open air; (3) prohibition of rags from infected places, as is done in the case of cholera; (4) disinfection. The latter he considers in some detail, giving the palm to that by superheated steam by means of Lyons' steam disinfector. But he considers it impracticable to make rag disinfection compulsory, on account of the objection of injury to the quality of paper, and the impossibility of proper discrimination between clean and foul goods. Besides, the 126th section of the Public Health Act of 1875 is sufficiently wide and elastic to prevent the passage of infected rags into the market; and, indeed, the onus lies on the first possessor of the infected rags, who parts with them, rather than with the dealers and manufacturers into whose hands they pass. In concluding his able and valuable report, to which interesting appendices are added, containing notes of outbreaks of small-pox at paper-mills since 1881, and *précis* of information as to measures taken in foreign countries to prevent the transmission of infected rags, Dr. Parsons suggests placing rag-dealing occupations under the supervision of the local sanitary authorities; as well as the disinfection at our ports of foreign rags by high-pressure steam.—*Medical Press*, July 13, 1887.

#### CORROSIVE SUBLIMATE IN MINUTE DOSES IN THE TREATMENT OF TYPHOID FEVER.

Dr. Edouard Rendot has employed mercuric chloride in the treatment of typhoid fever in a series of twenty-three cases. The drug was administered in an alcoholic menstruum in daily doses of 2 to 5 milligrammes—gr.  $\frac{1}{32}$  to  $\frac{1}{13}$ . This quantity is given in divided doses at intervals of two hours. To the objection that in these minute doses the drug is inadequate to produce physiological effects, Dr. Rendot replies that the doses are scientifically rational, and that they fulfil a positive indication of the typhoid infection. They are insufficient to destroy the vitality of the bacteria of typhoid; but possess, he believes, the power of neutralizing the toxic principles produced by their functional activity.

The author regards the following conclusions as justified by his clinical studies in this connection:—

1. Corrosive sublimate is serviceable in typhoid fever when employed in minute doses, that is to say, in amounts not exceeding 2 to 5 milligrammes in twenty-four hours.



2. Administered in an alcoholic potion it appears to diminish the duration as well as the intensity of the febrile process without any accompanying ill effects.

3. The prescription of solutions two or three times less potent than those capable of destroying the bacillus of Eberth, permits us very probably to combat in the blood secondary toxic principles of microbic or other origin. These relatively feeble solutions exert an influence more especially upon the products of the activity of infectious organisms without being able to destroy or sterilize these organisms themselves.

4. It would then be natural, in order to secure a direct antiseptic action in the intestine of typhoid patients corresponding to that exerted by the mercuric salt in the blood, where the bacilli are very limited in number, to also employ a germicide almost insoluble, as, for example, naphthol.

5. This mode of treatment does not at all interfere with the fulfilment of every symptomatic indication that may occur in the course of enteric fever by the use of appropriate medication.—*Gaz. Hebdom, Sciences Méd., Bordeaux*, December 11, 1887.

**TREATMENT OF TYPHOID FEVER; INVESTIGATIONS INTO THE ACTION OF COLD BATHS, ANTIPYRIN, AND ACETANILIDE UPON THE BLOOD-CORPUSCLES.**

Leclerc has recently treated in the service of Professor Lépine seventeen cases of typhoid fever by the following methods:

- 5 exclusively by cold baths;
- 5 by antipyrin alone;
- 2 successively by antipyrin and baths;
- 3 successively by acetanilide and baths;
- 2 successively by acetanilide and antipyrin.

A single case only terminated in death. It was that of a female nurse, twenty-four years old, admitted on the eleventh day, and whose only unfavorable symptoms was a somewhat unusually rapid pulse. Treated from the time of coming under observation by systematic bathing, she succumbed on the seventeenth day, death being due to syncope.

The object of the research was to ascertain by counting the blood corpuscles before, during and after treatment, whether or not there was a destruction of the corpuscles, and whether it differed according as one or another of the three methods of treatment mentioned was employed. The instrument and methods of Malassez were used. The counts were in every instance made by Leclerc himself, and differences of less than 300,000 were not regarded.

The statistical results are based upon ten cases, so grouped as to justify comparisons of grave, moderate and light cases.

*1. Grave Typhoid Fever.*



CASE I.—Female, aged 43, good previous health. Admitted on the ninth day of her sickness with high temperature and nocturnal delirium. Stupor marked for several days. Albuminaria considerable. Notable pulmonary congestion. Laryngeal trouble. Rapid pulse. Prolonged high temperature. The fever lasted forty-six days.

Treatment exclusively by cold baths.

22d August (day of admission), 5,040,000 corpuscles.

31st August, 4,000,000.

4th September, 3,500,000.

30th September, 3,480,000.

The loss of corpuscles was great. But it is to be noted that the patient was no longer young, and that the attack was both severe and prolonged.

CASE II.—Male, aged 18 years, of previous good health. Admitted on the seventeenth day, without previous treatment. Intense pulmonary congestion, nocturnal delirium and stupor. The fever persisted till the thirty-fifth day.

Treatment by cold baths alone:

30th September (day of admission), 5,120,000 corpuscles.

7th October, 4,800,000.

25th October, 4,520,000.

The destruction of corpuscles was in this case very slight.

CASE III.—Male, aged 18 years, poorly nourished. Admitted upon the sixth day of a fever, characterized by its long duration—forty-seven days—and stupor.

Treated from admission, August 24th, the day of admission, to September 3d, by antipyrin in daily amounts of four to eight grammes— $\overline{3j}$ – $\overline{3ij}$ .

After September 3d, by cold baths:—

31st August 4,850,000 corpuscles.

3d September, 5,100,000.

5th October, 3,400,000.

Thus antipyrin was given during eleven days, during which the patient suffered no loss of corpuscles.

Later a considerable loss occurred during the treatment by cold baths. The corpuscles showed less resistance than in Case II., which was treated from the first and exclusively by cold baths.

CASE IV.—Male, aged 19 years, admitted on the ninth day of the attack, August 31st. He presented a typhoid fever, very remarkable by the long duration of the sickness (till October 6th), by great stupor and by delirium.

A relapse occurred October 22d and lasted till October 31st.

From August 31st till September 18th, eighteen days, he was



treated by acetanilide in daily amounts of one to two grammes—gr. xv—xxx, afterwards by cold baths.

31st August, 5,830,000 corpuscles.

14th September, 4,700,000.

19th September, 4,900,000.

27th September, 4,200,000.

3d October, 3,700,000.

These doses of acetanilide of relatively small amount were followed by marked diminution of the corpuscles, which continued during the treatment by cold baths.

## *2. Typhoid Fever of Moderate Intensity.*

CASE V.—Female, aged 25 years, thin, and of only moderately fair previous health. Admitted September 5th on the fifth day of an attack of typhoid, marked by prolonged high temperature and followed by a relapse of five days beginning October 15th.

Treated by cold baths alone:

7th September, 4,920,000 corpuscles.

28th September, 4,200,000.

26th October, 4,680,000.

These figures show that despite the long duration of the fever the destruction of corpuscles was very slight.

CASE VI.—Male, aged 17 years, vigorous. Admitted August 15th, on the eighth day of an attack, which lasted twenty-five days, and presented no other peculiarity than marked stupor.

Treatment by antipyrin only, in daily amounts of five to eight grammes—gr. lxxv; cxx—from the 15th to the 27th of August, and in amounts two to three grammes—gr. xxx; xlv—from the 27th to the 30th. He suffered from a generalized drug-exanthem.

15th August, 5,000,000 corpuscles.

19th August, 4,820,000.

25th August, 4,840,000.

4th September, 4,300,000.

The loss in corpuscles was slight, and occurred chiefly in the last days of the illness.

CASE VII.—Male, aged 18 years, large and spare. Admitted September 21st, on the fourteenth day of an attack, which lasted in all thirty-three days, and which ran its course without notable incident.

The treatment commenced before admission by Dr. Cartier, by means of antipyrin in daily amounts of four to five grammes,—gr. lx; lxxv,—was continued with the same medicament in daily amounts of five to seven grammes—gr. lxxv; cv.

28th September, 4,800,000 corpuscles, proving that if there had been loss in the number of corpuscles, it was very slight indeed.



CASE VIII.—Male, aged 19 years, of previous good health. Admitted September 2d, on the seventh day of an attack, which lasted thirty-seven days, and of which the dominant symptom was great prostration.

Treatment from September 2d to 19th, by means of acetanilide in amounts of 2 to 3.50 grammes—gr. xxx; lv; and from September 19th to 30th by antipyrin in amounts of 2 to 4.50 grammes—gr. xxx; lxx.

2d September, 4,860,000 corpuscles.

5th September, 5,000,000.

14th September, 3,600,000.

19th September, 3,080,000.

26th September, 3,520,000.

12th October, 3,600,000. \*

21st October, *i. e.*, twenty days after the beginning of convalescence, the count showed 5,000,000 corpuscles.

These figures demonstrate the fact that during the seventeen days that the patient took moderate doses of acetanilide there was a rapid and enormous loss of blood corpuscles,—2,000,000 per cubic millimetre. This loss ceased upon the substitution of antipyrin for the acetanilide; in fact, there was a slight gain from that period. The result of the last enumeration shows how rapidly the corpuscles are reformed in a young person after convalescence is established.

CASE IX.—Male, aged 19 years. Admitted September 4th, on the seventh day of an attack of typhoid, which ran its course in twenty-eight days, without any notable peculiarity. Previous health, good.

Treatment from September 4th to 7th, by acetanilide in amounts of from two to three grammes; from September 7th to 20th, cold baths; September 4th, 5,280,000 corpuscles; September 7th, 3,160,000; September 25th, 3,200,000.

Acetanilide was given during three days only. During this time there was no loss of corpuscles; but there was an enormous loss before convalescence was reached.

### 3. *Mild Typhoid Fever.*

CASE X.—Male, 18 years old. Admitted on the 24th of September, upon the seventh day of a mild attack, of which the whole duration was twenty-three days.

Treatment by antipyrin in amounts of from two to four grammes, from September 24th to 28th; from that date till October 9th, in amounts not exceeding two grammes.

27th September, 4,920,000 corpuscles.

7th October, 4,640,000.

In this case the loss in corpuscles was insignificant.



An analysis of these cases shows,—

1. That of the grave cases, I. and II.,—which were treated exclusively by cold baths,—II., a young and vigorous man suffered an insignificant loss of blood corpuscles. I., a woman, no longer young, whose illness was very severe, suffered a considerable loss. III. and IV., in which the cold-water treatment was substituted after a considerable time for the treatment by antipyrin and acetanilide, showed a very large loss in corpuscles, which began at once in case IV., treated by acetanilide, and during the treatment by cold baths in case III., in which the treatment was begun by antipyrin.

2. That among the cases of moderate intensity, case V., in which the attack was of long duration and followed by a relapse, the treatment by cold baths exclusively was followed by a very slight loss of corpuscles. During the treatment by the method of Brand, in case IX., there was a very considerable corpuscular loss; but the fact is not to be overlooked that the treatment by acetanilide preceded that by cold water.

Antipyrin was given exclusively to cases VI. and VII. In both instances the corpuscular loss was but slight. This drug was administered after a course of acetanilide in case VIII. Up to the moment of the change this patient suffered rapid destruction of corpuscles, which, however, thereupon ceased.

3. That the single mild case (No. X.) treated exclusively by antipyrin, showed merely an insignificant loss of corpuscles.

Leclerc considers that these facts warrant the following conclusions:—

That in typhoid fever, where cold baths are given from the beginning and exclusively, the diminution of blood corpuscles is trifling.

That in cases of a corresponding degree of severity, treated by antipyrin under the same conditions, it is also slight.

It is more or less considerable in all cases subjected to treatment by acetanilide.—*Lyon Méd.*, December 12, 1887.

#### A METHOD OF TREATMENT OF DILATATION OF THE STOMACH.

Dilatation of the stomach is a disorder that has received of late years much attention at the hands of French and German clinicians. They ascribe to it a far larger influence in the causation of dyspeptic symptoms than it has been generally supposed to exert. The investigations of G. Sée, Mathieu, Burchard, and a number of German observers have brought the subject prominently to the attention of the profession in all parts of the world. Mathieu has arranged the various forms of dilated stomach into the following groups:—

1. Dilatation from organic lesion of the pylorus and constriction of that orifice.

2. Dilatation from degeneration of the muscular fibres of the wall of the stomach.

3. Dilatation from atony, or general feebleness of the muscular system.

4. Dilatation from muscular atony, from imperfect innervation, such as occurs in neurasthenia. Here there are at first alternations of atony with exacerbations of hyperexcitability of the gastric muscle causing painful dyspepsia. Later there is permanent atonic dilatation.

It is only in the last two groups of cases that much benefit can be expected from treatment.

Mathieu has presented the plan of treatment he has adopted in *Le Progrès Médical*, February 12, 1887. It is as follows:—

1. *Avoid Alimentary Excesses.*—The stomach should never be overloaded. To secure this the number of meals must be increased and the quantity of food taken at each meal diminished. All foods which contain a large residue of undigested matter, such as string beans, salads, and many of the fruits, are forbidden. In fact, the greater number of vegetables are cut off. Potatoes are, however, permitted. The food must be very finely divided and thoroughly masticated. It is best to have liquids warmed. As a rule, wine is to be avoided.

2. *Regulate the Functions of the Bowels.*—Constipation is the rule in these cases. Professor Sée recommends for this condition a powder composed of sulphur, cream of tartar, and magnesia in equal parts. Of this a teaspoonful may be taken just before each meal; but the dose is to be increased or diminished according to the requirements of each particular case. An enema containing glycerine may be administered each morning. Great importance is attached to regularity of habit in exciting the action of the bowels.

3. *Improve the General Tone of the System.*—To this end systematic cold douches are most efficient. They are to be employed every second day for twenty-five or thirty seconds. If badly borne, this treatment may be begun with warm jets along the spine.

4. *Strengthen the Muscular Fibres of the Stomach.*—Calabar bean and nux vomica have been recommended, but Mathieu regards powdered ipecac as our most efficient remedy. It may be administered in doses of eight or ten grains in wafers every second or third morning, or suspended in dilute orange syrup in smaller doses. In sensitive persons nausea or even vomiting may occur; but the larger dose is well borne by the majority of patients.

5. *Relieve Pain, etc.*—Dilatation of the stomach in neurasthenic subjects is usually accompanied with epigastric sensations of a more or less distressing character. Sometimes there is merely a sense of weight; sometimes there is positive pain, pungent or lancinating, such as is met with in the gastralgia of chlorosis, or even in gastric ulcer.



Great relief follows the use of warm drinks. Chloroform water and cocaine hydrochlorate are also useful. The presence of pain does not contra-indicate the systematic use of ipecac, as above; on the contrary the pains gradually yield to its general favorable influence along with the other symptoms.

CARBOLIC ACID AND OPIUM IN THE TREATMENT OF CERTAIN FORMS OF VOMITING AND PAINFUL DYSPESIA.

The remarkable analgesic and anæsthetic properties of carbolic acid were first utilized in the treatment of certain forms of vomiting by Dr. Edward Garroway, of England. Its beneficial effects were especially noticeable in hysterical vomiting and the vomiting of pregnancy. Dixon, Edward Bevan, and others have employed this remedy with positive advantage in various forms of painful dyspepsia. Bevan found its effect enhanced by combination with English black drop (acetum opii). In accordance with these results, Pécholier, of Montpellier, has employed the combined remedies as "calmative and anti-emetic." His formula is as follows:—

R. Pure deliquescent carbolic acid . . . . 1 part.  
English black drop . . . . . 3 parts.—M.

Four drops of this mixture are to be taken three times a day in a little sweetened water ten minutes before food.

The author cites cases in which this treatment has proved successful. They include obstinate vomiting of pregnancy, stubborn vomiting with epigastric pain in chlorosis, dilatation of the stomach, and severe gastralgia without vomiting.—*Gaz. hebd. des Sciences Méd. de Montpellier*, Jan. 22, 1887.

THE LIVER.

F. Müller, as the result of an elaborate experimental investigation into the derangements of digestion in icterus, formulates the following conclusions:—

In obstruction to the entrance of bile into the intestine, the absorption of starches is in no degree affected, that of the albuminoids very slightly, but that of the fats is very seriously interfered with. In complete obstruction, from 55.2 to 78.5 per cent. of the fat taken in the food was recoverable from the stools, while in health not more than 6.9 to 10.5 per cent. is voided.

In the absence of the pancreatic fluid from the intestine, the digestion and absorption of the starches is not at all disturbed, though it would appear that the digestion of meats is a little less complete. No increase of fat in the stools could be determined, and it is doubtful whether steatorrhœa belongs to the symptom-complex of diseases of the pancreas.

In diseases of the absorbing apparatus of the intestines (amyloid

disease, tuberculosis, disease of the mesenteric glands, enteritis) the absorption of the fats suffers to a greater degree than the other constituents of the food, and the dejections correspondingly exhibit the microscopic and chemical characteristics of fatty stools.

In healthy persons, as well as in cases of jaundice, when the pancreatic juice has access to the intestine, the greater part of the fat of the fæces appears to be entirely decomposed,—an average of 84.3 per cent. In three cases of closure of the pancreatic duct, with degeneration of the gland, a greatly diminished degree of decomposition of the food was noticeable,—an average of 39.8 per cent. It appears, therefore, that the absence of pancreatic fluid in the intestine brings about a *qualitative* and not a *quantitative* change in the fat contained in the stools. The pancreatic fluid is found to disintegrate fat far more completely and rapidly than bacteria.

The melting point of fæcal fat is higher and exceeds the melting point of food fats in proportion as the absorption of fat has been more or less complete. Fats which easily melt are more readily absorbed than those of a relatively higher melting point.

The presence of needle-shaped fat crystals in the fæces indicates disturbance of the normal process of fat absorption. It occurs in icterus and in other diseases associated with diminished fat-absorption. These needle-shaped crystals consist of free fatty acids and of lime and magnesia soaps.

In cases of simple icterus there is no pathological change in the albuminous constituents of the fæces; the condition of the compounds of the sulphur acids and of the neutral sulphur does not materially differ from that of health.—*Zeitsch. für Klin. Med.*, B. XII., H., 1, 2.

#### THE INTESTINES: ENEMATA OF ICED WATER IN THE TREATMENT OF DIARRHŒA.

Injections of iced water are used with success in the Birmingham General Hospital, in the collapse occasionally occurring in the severe forms of diarrhœa of young children. Two or three fluid ounces are injected. The immediate effect is relief of the symptoms of collapse, followed by tranquil sleep. The diarrhœa is controlled, and repetition of the injection is rarely required. At the same time medication by the mouth is continued.

#### THERAPEUTIC USE OF HOT WATER IN VARIOUS AFFECTIONS AND ESPECIALLY IN DYSENTERY.

The therapeutic use of hot water, hitherto restricted to gynæcological practice, is of much wider application. Raymond Tripier has used it with satisfactory results in saturnine colic, in the vesical and rectal tenesmus of tabes, and with complete success in dysentery. The water injected should be of the temperature of 45–48° C., of large



amount, 300–500 centimetres in children, and a litre in adults. If, in dysentery the injection be retained, then follows immediate relief of pain; decrease, then disappearance, of blood from the stools, and a diminution of their frequency. This treatment alone will in many cases effect a cure. Nevertheless, Tripier in grave cases administers at the same time a decoction of ipecac.

Among other cases the author cites that of an infant twenty-one months old, whose movements occurred every fifteen or twenty minutes, and who after the first injection was quiet two hours, then had no movement for three hours, and, in a word, was in a brief time fully convalescent.—*Jour. des Sci. Méd. de Lille*, April, 1887.

#### CONSTIPATION AND MASSAGE.

1. Abdominal massage is a harmless and useful method of treatment in constipation rebellious to ordinary therapeutic measures.

2. The duration of each *séance* should not exceed fifteen or twenty minutes. The *séances* should at first be held daily.

3. The bowels begin to move normally, as a rule, about the sixth *séance*, and after systematic treatment for a longer or shorter period its effort persists.

4. Gentle pressure should be made over the gall-bladder with a view to the stimulation of its contractions. This maneuver is suggested by the author as an important addition to the methods of massage hitherto in vogue.

5. Massage not only stimulates peristalsis, especially that of the large intestine, but it at the same time excites the more abundant secretion of the intestinal juices.

6. In addition to the reflex phenomena which it produces, massage acts upon the bowel mechanically, and facilitates the onward movement of its contents.

#### DISEASES OF THE MIND AND NERVOUS SYSTEM.

UNDER THE CHARGE OF

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#### REMOVAL OF A LARGE BRAIN TUMOR.

At St. Mary's Hospital, Philadelphia, on December 15, 1887, Dr. W. W. Keen removed a tumor from the left side of the brain of a man aged 26 years. The patient was injured by a fall at three years of age. At twenty-three years of age he suffered from epilepsy, with right-sided deviation of the head and eyes, followed by paralysis of the

right arm and leg and aphasia. The initial symptoms of the epileptic fits pointed to the centre for conjugate deviation of the eyes. The tumor measured  $2\frac{7}{8}$  by  $2\frac{1}{8}$  inches, and was  $1\frac{3}{4}$  inches thick. It extended from the fissure of Sylvius into the first frontal convolution, and from near the fissure of Rolando into the bases of the three frontal convolutions, and weighed three ounces and forty-nine grains. We learn that the patient is doing very well, so far the highest temperature having been only  $100.8^{\circ}$ ; and already primary union of the flaps has followed, except at the drainage openings.—*Medical News*, December 24, 1887.

#### FRIEDREICH'S DISEASE.

M. Paul Blocq describes a case which he thinks conforms very closely to the type as described by Friedreich. A man, aged 20, of good heredity and antecedents, traced his disease back six years. It began with a sense of fatigue and weakness which interfered with his walking, which became more and more laborious. He struck the ground forcibly with his heels. He walked like a drunken man. Next, his ability to stand became so affected that he was obliged to keep his bed. He had no pain. The arms became incoördinate about two years after the beginning of the disease. The head oscillated. The speech had been embarrassed from the beginning. When first seen by M. Blocq, he appeared as a man of feeble constitution. He responded intelligently to questions; his speech was trembling, embarrassed, and like that of a patient with sclerosis *en plaques*. The words were articulated slowly, scanned or stammered, and emitted at long intervals. The tongue was moved freely. The limbs were not atrophied or deformed, except a notable talipes equinus on both sides. On attempting certain movements of precision with the legs and feet, shaking and incoördinate movements resulted, which incoördination was not augmented with the eyes shut. The muscular power was perfectly preserved. The incoördination was more marked on the left than on the right. He walked with two assistants, throwing his limbs from one side to the other, describing great arcs of a circle, and striking the ground violently with his heel. Darkness did not increase his difficulty in walking. The arms presented similar phenomena. In attempting to put his index finger to his nose a series of disorderly movements, exaggerated on the left side, occurred. Writing became impossible. On moving the head incoördinate movements also took place, and sometimes nodding movements, as in a person who sleeps upright with the head unsupported. The eyes showed in repose a slight horizontal nystagmus, and especially if fixed on one point. No disorder of sensibility existed; he felt perfectly his legs in bed. A careful examination did not reveal any zone of anæsthesia or hyperæsthesia. The special senses were



not affected. The sphincters were normal, as was also the sexual apparatus. The patellar reflexes were completely abolished on both sides. There was no trophic trouble, and the electrical reactions were normal. In closing his report M. Blocq says that the motor incoördination, the abolition of the patellar reflexes, the nystagmus, the embarrassment of speech, the absence of troubles of sensibility, and of anomalies of the sphincters, make a picture which cannot possibly be confounded with progressive locomotor ataxia or disseminated sclerosis. He defends Friedreich from the imputation of Longuet that the former exaggerated in order to differentiate this disease which he described from true tabes.—*Arch. de Neur.*, March., 1887.

#### HYSTERIA AMONG SOLDIERS.

Dr. Oseretzkowsky, of Moscow, publishes in the *Archives of Neurology* a series of observations which demonstrate that hysteria is much more frequent among soldiers than was hitherto deemed possible; and that it is the cause of many false interpretations of disease, to the prejudice of men and the scandal of the profession. Eleven cases observed in the clinic of the Military Hospital at Moscow are recorded in this paper; and some of the incidents related are very remarkable, including attacks of total loss of voice and hearing, which would come on and go with almost instantaneous suddenness, periods of total deafness which attacked the ears alternately, spasmodic retention of the urine, necessitating prolonged use of the catheter. In short, neuroses of every description, paralyses, etc., were observed.—*St. Louis Med. and Surg. Jour.*, March, 1887.

#### HYPNOTISM.

Dr. Gilles de la Tourette has written strongly on the dangers of hypnotism, holding that public *séances* showing persons in a state of hypnotism are dangerous to the cerebral equilibrium of the spectators, and that they often cause grave nervous troubles. He gives an instance of a physician of Marne, who hypnotized a young man in a healthy and vigorous state, and who afterwards developed a sort of idiocy. A physician at La Salpetriere put a young woman to sleep by means of blows struck on a gong. He then pretended they were in the Bois de Boulogne, and she was delighted to describe the trees and to gather the flowers. After a time the doctor suggested that *when she awoke* she should poison a physician in the hospital. She pointed to a glass on the table, saying it was the one in which she had poured out the poison. Scarcely had she been awakened than she by various means tried to induce the physician to drink from the glass. He did so and fell to the ground in a pretended swoon. The farce was carried out and a pretended judge introduced. The young woman persisted in denying her guilt, but she was greatly excited. It was found impossible

to draw from her any confession. Finally they were obliged to put her to sleep again, and in this state succeeded in making her believe that this scene had never taken place.—*Gaz. Méd. de l'Algérie*, March, 1887.

#### PARA-MYOCLONUS MULTIPLEX.

Prof. Homen, of Helsingfors, describes a case of this novel and rare affection as follows:—A man, aged 45, after a severe fright some years before, had a convulsive seizure with loss of consciousness. This was followed by involuntary shocks in the thighs and arms, and, rarely, in the face, followed by involuntary movements, isolated or in series, resembling a tremor. They varied in frequency and intensity, without ever disappearing for a long time. They were augmented by voluntary movement, work, the emotions and fatigue. Stimulation quieted these shocks for a short time, but its abuse brought on a convulsive attack with loss of consciousness. There was no pain or atrophy. The intellect and senses were normal. The pupils reacted to light and accommodation. Sensibility of all kinds intact; no hyperæsthesia. Speech was interrupted sometimes by a hiccough; the movements of the tongue were free. The muscles of the mouth and the zygomatics presented muscular contractions, especially during speech. The muscles especially affected in the arms were the long supinator, biceps, deltoid, triceps, and extensors of the wrist, the same on both sides, but not always simultaneous. All the muscles were not generally affected at the same time, but alternately. The best means to steady him was to cause the patient to hold something in the hand, extending the arm; and it happened sometimes that the object would be thrown violently some distance by a quick movement of supination. The shocks were of variable intensity, and there could be counted as many as twenty to twenty-five in fifteen seconds. The patient could use his hands in work: he could write easily. The thigh muscles were also affected, and Homen gives very exact details about them. When he stood up the patella rose and fell alternately, and there were bendings of the knees, accompanied by quick extension, causing the patient almost to fall. Sometimes a strange shock of all the body occurred, resembling the movement made on receiving a blow in the epigastrium. When the patient, standing upright, approached his feet together, especially if he closed his eyes, he easily lost his balance, chiefly because of the shocks in the muscles of the trunk. Walking was difficult because of the shocks in his legs, but was easier if he held some one by the hand. In a bath, at 35° C., his whole body was seized by such disorderly movements, his arms and legs being thrown here and there, that he had to be immediately restrained. The muscles and nerves acted normally to galvanism and faradism. Upon tickling the sole of the foot, or attempting to produce ankle clonus, the shocks were best excited,



especially in the quadriceps, being propagated to the muscles of the other thigh and to those of the trunk, especially the dorsal muscles. The skin reflexes were not especially augmented. As to the tendon reflexes, and particularly the patella reflexes, they were evidently rather diminished. But repeated percussion on the patella tendon caused shocks in the quadriceps, accompanied by a tetanic extension of the leg.—*Arch. de Neurol.*, March, 1887.

#### ENTEROPTOSIS AND NEURASTHENIA.

This is the title of a memoir communicated to the *Société Médicale des hôpitaux*, by Dr. Glénard, reported by M. Féréol. This description of a disease is based upon a study of the anatomical conditions of the digestive tube, with reference to its attachments, its modes of suspension, its connection with the viscera, and the influence which disorders of that organ may have upon digestion and the general health. Glénard describes six bends or turns which the tube makes, and which can at a moment form an acute angle and present an obstacle to the advance of the ingesta. These six points are (1) the stomach, (2) the duodenum, (3) the ileo-cæcal valve, (4) the cæcum and ascending colon, (5) the transverse colon, divided into two parts by the ligament which attaches the colon to the stomach, and the descending colon. The most important point of suspension is a fibrous band following the superior mesenteric artery, "the veritable suspensory ligament of the small intestine," which is fully described, as well as the others mentioned. The pathology of these parts is described as follows:—A number of those complex morbid conditions, which are designated under the name of neurasthenia, nervousness, intestinal dyspepsia, cerebro-spinal exhaustion, have for their starting-point a sinking of the right angle of the colon or the transverse colon, also of the stomach and the liver; one kidney becomes movable, and displacements of the uterus also play a secondary rôle.

For this disease, which he calls "enteroptose," Glénard claims a special place in nosology. The symptoms of the disease are: the relaxation of the abdominal walls, the sensation of pulling down the stomach, the feeling of weight at the epigastrium, the need of lying down during digestion. Dilatation of the stomach is often secondary to the disorder caused by the sinking of the transverse colon, and stretching of the ligament from the stomach to the colon. Accouchement is the most frequent cause of the disorder, especially in those women who rise too soon, or who do not wear a binder. A fall, a blow, a muscular effort, and the abuse of corsets, are causes. Certain diseases, as typhoid fever and dysentery, may so alter the structure and relations of the intestine as to cause the disease; and it may coëxist with bilious disorders and hepatic pseudo-colic. A decisive proof of the presence of this disease is to pass the arms under the axillæ and

carry the two hands, laid flat, upon the abdomen, raising and compressing it, which causes the patient to experience a sense of relief. One of the best remedies is therefore an abdominal supporter, which gives a permanent cure, relieving the dragging-down sensation, and removing the stercoraceous masses which have resisted purgatives.—*Gaz. des Hôpitaux*, February 27, 1887.

#### TETANUS.

Dr. Shakespeare, Pathologist to the Philadelphia Hospital, related before the Section of Pathology at the International Congress a series of experiments on tetanus, consisting of inoculation of rabbits after the methods of Pasteur with material obtained from the medulla and spinal cord of a horse or mule which had died of traumatic tetanus. Injections were made beneath the cerebral dura-mater, as well as subcutaneous and intermuscular injections. He concluded that traumatic tetanus of the horse or mule is sometimes, if not always, an infectious disease, transmissible to other animals, and therefore possibly to man. The virus is contained in the medulla and spinal marrow, and, like that of rabies, is capable of attenuation by exposure to dry air at a temperature of summer heat. It also resembles the rabic virus, producing more intense effects when inserted beneath the cerebral dura mater than when injected subcutaneously or between muscles.—*The Lancet*, November 12, 1887.

Audry writes on the subject of the infectious nature of tetanus at some length. Many observers in the past have held this view of the nature of the disease. Paré believed that foul dressings were one of the causes of it. Bajou observed that *trismus neonatorum* diminished when the umbilical wound was kept clean. During the Seven Years' War there were terrible and vast epidemics of tetanus. Larrey observed them in Egypt. Lister has not observed much tetanus follow his operations since using antiseptics; and Cooper, Billroth, and Socin admit the probable infectiousness of the disease. In Denmark antiseptics caused trismus, which ravaged a maternité, to disappear. Many other observations are given. Cagnat having castrated six horses with the same *écraseur*, saw them all die of tetanus; the *écraseur* being then disinfected the mortality ceased. Huvelier lost by tetanus fifteen horses in as many operations performed at one time. Anger has seen a dog develop tetanus from a horse. Verneuil advocates the theory of the equine origin of human tetanus. Experiment seems to confirm these clinical observations. Carl and Rattone inoculated tetanus from a patient with a pustulous sore of the neck. With injections of their dilution they had trismus and opisthotonos in eleven rabbits out of twelve. The claim of Rosenbach to have discovered a specific microbe of tetanus is discussed. He isolated a bacillus which he claims reproduces tetanus in the inoculated animals. Audry



will not admit as a demonstrated fact the absolute value of the bacillus of Rosenbach; but admits as highly probable the infectious and transmissible nature of tetanus.—*Lyon Méd.*, August 14, 1887.

## CHOREA.

Schwartz reports a case of imitative chorea with fatal result, in a woman, aged 56, who was attacked by chorea while nursing her choreic daughter. She had led an unhappy life. The choreic movements in her face became more and more tonic. Insomnia, change of character, forgetfulness, disturbance of speech appeared, until at last the choreic movements ceased entirely, and a total hemiplegia of right side with aphasia set in, and the patient died in a stuporous condition. Schwartz thinks that the cortical hyperæmia in a brain weakened by psychic influences had led to anatomical lesions.—Quoted in *Cent. für Gyn.*, November 19, 1887.

## NEURITIS.

During the year 1887 observations on various forms of neuritis have appeared in large number,—multiple neuritis of alcoholic and syphilitic origin; neuritis from metallic agents such as mercury, lead, and arsenic; enteric, diphtheritic, malarial, and other forms, after infectious or contagious diseases; and endemic tropical neuritis, that is, beri-beri or kakke. Even special forms of localized neuritis have had attention redirected to them through the awakening of interest in the general subject; and in consequence we have new studies on such subjects as plantar neuritis, local neuritis of rheumatic or traumatic origin, etc. In the *SATELLITE* for August, a résumé of some of these researches was given, and in the forthcoming *ANNUAL* the subject will be reviewed in detail. We shall refer here to only one of the many recent contributions,—that of Dr. Karl Weintraub, Sanitary Chief of the Netherland East Indian Army, who has published one of the most comprehensive and valuable papers on beri-beri which has yet appeared in any language. His paper runs through fifteen numbers of the *Wiener Med. Woch.*

Weintraub reviews the entire subject even to the derivation of the terms beri-beri and kakké. He distinguishes between two different varieties of beri-beri,—the paralytic and the hydropic; and shows that sometimes there is a hydropic-paralytic or combination variety of the disease.

Ondenboren, Swaring, and others claim a third variety of beri-beri called the polysarcose form, characterized by a large and thick adipose deposit; but Weintraub and others show the increased thickness of the fat layer to be due to the imbibition of serous fluid by the fat cells, which is proved by the rapid thinning of this layer as soon as there are free diuresis and diaphoresis.

Beri-beri may also be divided into acute and chronic forms. In the former variety death results in several days or a few hours. The chronic form admits of recovery, though this is often prevented by dysentery and febrile complications. Weintraub relates an acute case,—a soldier who came to him with slight pain in the lower limbs and an unsteady gait that had existed for a very brief time. He was put to bed, and in two hours was completely paralyzed in both lower limbs, had hydro-pericardium and hydrothorax, developed marked dyspnoea and cyanosis to a high degree, and died shortly of asphyxia and cardiac paralysis.

We will content ourselves here with giving the highly interesting results of numerous autopsies in cases of beri-beri as collected by Weintraub.

The brain and cord and thin membranes are normal, but the cerebro-spinal fluid has a slight reddish tinge explained by the terrible death struggle. *The peripheral nerves are normal.* Hydrothorax and pulmonary oedema and congestion are present in proportion as the disease was of the hydropic variety. Haga found in 25 autopsies that 16 had pulmonary oedema, 8 pulmonary congestion, and 1 pulmonary anæmia. The average amount of pericardial fluid according to Haga is 92.2 grammes. Sometimes there are subpericardial ecchymotic striæ. In the majority of instances the heart is so much enlarged in all directions and so markedly hypertrophied as to have been called “cor bovinum.” In 50 autopsies of Weiss and Lodewyks, 47 showed simple hypertrophy, eccentric hypertrophy, or single dilatation of the left or both hearts, and in only three instances did they find an atrophied heart. The heart undergoes a well-marked fatty degeneration. The average weight of the heart in Haga’s 25 cases is 369 grammes, the smallest being 277 grammes, and the largest 455 grammes. Lodewyks and Weiss found invariably in their 50 autopsies that there was well-marked atheroma of the aorta, the three carotids, innominate, subclavians, iliacs, vertebinals, and coronary. The interior of the small vessels was always normal. The blood is hydræmic, its corpuscles are diminished in number, and its fatty constituents are increased. Haga has found the leucocytes increased in number. There is usually more or less hydrops peritoneum, and sometimes this is very excessive; the stomach is distended, and its mucous lining often ecchymotic in places; the liver, spleen and kidneys are generally hyperæmic, but not structurally changed; the gut is normal, except an occasional congestion and slight ecchymosis of its mucous membrane. Erni has found large numbers of trichocephalus dispar in the gut, while Stammerhaus, on the other hand, has found nothing but anchylotoma duodenale in almost all cases. Lodewyks and Haga both agree that all striated muscles undergo fatty degeneration.



The post-mortem appearances are inadequate to explain the symptomatology of this disease. Especially is this true of the motor and sensory disturbances. Weintraub holds also "that the appearances of the heart are of a secondary nature. The cause of the circulation disturbance is in the disease of the vessel walls, especially in the larger arteries." He further holds that the atheroma of the great vessels indicate previous inflammatory disease, lessened calibre of the vessels, consequent strain and dilatation of the left heart, and secondary involvement of the right, with venous stasis, œdema, defective oxydation, and dyspnœa. His hypothesis as to cause is that the bacillus of beri-beri is taken in through the lungs and carried to the heart, whence it is sent out along the great vessels which it attacks through preference. Wientraub joins Lodewyks in believing the motor and sensory disturbances to be due to a form of spinal paraplegia because of its symmetrical involvement of muscle groups. Schenbe and Bachz are in favor of ascribing these disturbances to peripheral nervous disease. Schneider and Simmons explain the motor disturbances on a myopathic basis; but it has not yet been determined whether the muscles are primarily or secondarily degenerated.—*Weiner Med. Woch.*, June 4, 11, 18, 25; July 9, 16, 23; August 13, 20; September 9, 17; October 8, 15, 22, 29; 1887.

## SIMPLE ACUTE MUSCULAR ATROPHY.

The simple muscular atrophy emphasized by French writers, and lately also by Charcot, as being due to joint inflammation, fractures, etc., have received, according to Kast, of Freiburg, a new interest in Germany, especially through Lücke's important work, from which it appears that contusion of muscles is an important factor in the production of atrophy. With the exception of the vivisections of Volta, we have no anatomical knowledge of the subject. The author, in common with K. Middledorf, observed at the Freiburg surgical clinic recent cases in which there existed acute effusions into the knee-joint, or contusion of the quadriceps, and in which the development of the atrophy could be observed. They found decided relaxation of the muscles, without serious but with a marked quantitative diminution of the electrical excitability. A constant rise in the patella reflex could not be demonstrated. The examination of excised muscles from cases having fresh knee-joint effusions, or from those having severe contusions associated with a rapidly developing atrophy, revealed no inflammatory changes. They also studied this form of atrophy in rabbits. They injected croton oil and tincture of iodine into the joint and pounded the muscles. This resulted in marked relaxation, with changed excitability and rapidly developed atrophy. Here, also, it was impossible to note a progressive inflammation of the muscles.—*Neurologisches Centralblatt*, July 15, 1887.

THE RELATION OF A CERTAIN FORM OF HEADACHE TO THE EXCRETION OF URIC ACID.

Dr. Alexander Haig, in a recent paper, has recorded some observations on his own person relating to this subject. The relation of his headache to the excretion of uric acid at first appeared equivocal; but definite results were obtained on separating the urine excreted during the headache from that before and after. There appeared to be retention of uric acid before the headache, excessive excretion during the headache, and diminished excretion after the headache. During headache there was no alteration of urea. This alteration of the relation of urea and uric acid during headache was regarded as important. The theory which best explained everything was diminished alkalescence of the blood. The author regards the subject in its relation to gout, and asks whether this diminished alkalescence was due to a diminished power to form ammonia under the gouty influence. Anything which increases the alkalinity of the blood, as salicylate of soda or a full meal, will cause the headache to improve.—*British Med. Journal*, May 28, 1887.

THE PATHOLOGY OF INVETERATE NEURALGIA OF THE FIFTH NERVE.

Prof. Victor Horsley read a paper on this subject recently before the Odontological Society of Great Britain. Severe pains in the fifth nerve may be caused by intercranial disease, or by disease of the nerve trunk, or of the peripheral extremity. It is scarcely necessary to dwell upon the first class, since well-recognized rules apply to their diagnosis; but it is often difficult in the extreme to differentiate the others. He gives the following indications:—Trophic changes indicate a lesion of the nerve-trunks, such changes being swelling, glazing of the skin, hyperæsthesia, dilatation or contraction of the vessels, and wasting of the muscles. Certain abnormalities of sensation give important indications; thus hyperæsthesia in one area and anæsthesia in another might be caused by a lesion of the trunk. If pain begins in the bone or skin, and subsequently invades the teeth, it is an inference that the trunk is affected. Distinctly tender spots along the nerve branches indicate that the whole nerve is irritated, although not invariably. Pain or movement indicates a lesion of the nerve-trunk. Horsley thinks that nerve-stretching gives only temporary relief, while avulsion, performed as close to the exit from the skull as possible, generally cured, success depending partly on obtaining primary union. No trophic changes follow avulsion.—*Brit. Med. Journal*, July 23, 1887.

REFLEX OR TRANSFERRED PAINS.

No point connected with the clinical history of neuralgias, according to Dr. C. L. Dana, is of more interest than that of their so-called "reflex" origin. The production of migraine has been attributed to the stomach and liver, to the eye, the tonsils, and the



nose. Digital, plantar, cardiac, intercostal, and, in fact, all the neuralgias, have been attributed to extrinsic causes. The importance of this influence has, perhaps, become exaggerated; but the subject is one deserving of further and persistent study. The term "reflex," used here, is not technically correct. An irritation in the stomach may cause a pain which is felt in the forehead. The impulse starting in the stomach nerves, is conveyed to the cortex of the brain, and this is felt as a sensation excited by the trigeminal nerve. It is a "transferred" sensation, not a reflex one, since the impulse is afferent only, and the outward reference of the pain is purely psychical. In some cases it may be that irritations provoke vaso-motor changes in remote parts, and the anæmia or congestion thus produced causes pain. There may be, therefore, "indirectly produced reflex pains." The term reflex pain, however, is so widely used that it cannot easily be discarded.—*New York Medical Journal*, July 30, 1887.

Dr. Albert P. Brubaker, of Philadelphia, in the *American System of Dentistry*, under the head of Reflex Neuroses Associated with Dental Pathology, has collected a series of several hundred cases, medical, dental, or neurological, which show the mutual influences and interactions of the teeth and other structures of the body. It is a most valuable compilation, the cases cited or referred to having been selected with especial care. According to Brubaker:—1. A pain in the tooth by no means indicates that the tooth is the seat of the source of the trouble; it may be in another tooth, or in any other tissues, near or remote. 2. Dental disorders may induce pathological conditions in other parts of the body, or in the nervous structures themselves without the existence of any subjective intimations of pain in the teeth on the part of the patient. In other words, one may have toothache in the brain, the ear, the stomach, or the hip-joint; or one may have headache, gastralagia, etc., etc., in the teeth.

#### WRITER'S AND TELEGRAPHER'S DISEASE.

At a meeting of the Berne Medical and Pharmaceutical Society, Dr. Dubois, of Berne, made an interesting communication on the electrical reaction of the muscles in cases of telegrapher's and writer's cramps. In three cases, telegraphers, in which the symptoms had lasted a week, he found a considerable increase in faradic and galvanic irritability, especially pronounced in the thenar muscles, in the opponent and abductor. In a fourth case, in which telegrapher's cramp existed for a couple of years, instead of increase of muscular irritability there was slight depression of the electrical reaction over the thenar region.—*British Medical Journal*, June 11, 1887.

An apparatus for the relief of writer's cramp called the kaligraph by the inventor, the late Charles Thurber, was recently exhibited

before the New York Neurological Society by F. C. L. Dana. It consisted of a framework to which was attached a series of leathers so arranged that by making large characters at one angle the characters were reproduced in ordinary size at the opposite angle. It was, in fact, a reversed pantagraph. The instrument fulfilled the indication of resting the groups of muscles most used, and throwing the work upon other groups; but it was cumbersome and expensive. Ten cuts of various forms of instruments for writer's cramp were shown. The kaligraph had been in practical use for thirty years, but was little known. Dr. Jacobi thought this instrument was only palliative, while Nussbaum's was also curative, and could be carried about by the patient. It compelled the writer to use abductors. Dr. Birdsall thought writer's cramp was due to cerebral fatigue, and that instruments for overcoming it could be of only limited benefit.—*New York Medical Journal*, May 21, 1887.

#### ANTIPIRYN.

Dr. J. C. Wilson has published a note on antipyrin in the treatment of sciatica. He has recently used antipyrin in three cases with gratifying success. The cases were all first attacks, and the first two were of great severity. The immediate relief from pain following the dose of antipyrin was almost as great as after hypodermic injections of morphine or chloroform; the remissions were as prolonged and the course of the attack far shorter than usual under similar treatment. The best plan of administration in cases of neuralgia, neuritis, and other painful affections is to give the dose upon the recurrence of exacerbations of pain rather than at stated intervals. This plan was long since found the best in treating sciatica by analgesics, as hypodermic injections of morphine. Antipyrin in doses not exceeding fifteen grains is well borne by the stomach, and may be given without fear of endangering the digestion for several days consecutively. The chief contraindication is feebleness of the circulation. Dr. Wilson relates a case in which alarming prostration promptly followed the administration of five grains in a very fat woman with feeble heart-walls.—*Philadelphia Medical Times*, October 15, 1887.

The *Medical and Surgical Reporter* for October 8, 1887, contains a highly interesting communication on the treatment of painful affections of the head (cephalalgia, migraine, tic douloureux) by antipyrin, by Prof. Germain Sée. He directed attention to the master symptom, the cerebral pain, which he endeavored to combat without attempting to reach the cause. He found nothing so useful as the regular continuous employment of antipyrin, which has proved itself to be a unique remedy for these pains. He had notes of twelve cases, which comprised adolescents from 13 to 19 years of age, of



whom the greater part were suffering from cardiac headaches, and who had all been treated unsuccessfully by the ordinary methods. In all these cases antipyrin administered in doses of fifteen grains three times a day succeeded in calming the headaches at the end of two or three days, and causing them to disappear altogether at the end of six or eight weeks, the treatment being persevered with during this time.

#### SODIUM CHLORIDE IN MIGRAINE.

Rabow discovered by accident the value of common table salt in migraine. A patient of his, a young man afflicted with migraine, was in the habit of aborting each paroxysm by taking a dose of sodium chloride that he always carried with him for this purpose. An aunt of his, who suffered greatly in the same way, resorted to the same remedy, and with success. It was taken at the beginning of the aura, and is especially effective in cases like his, which begin with stomach disturbances. The dose was one teaspoonful, followed by water. Rabow has successfully employed salt in six cases. The remedy is valuable in that it often does good, and if not effective it cannot do harm.—*Therap. Monatsheft*, April, 1887; *Wiener Med. Presse*, May 1, 1887.

#### THE ACTUAL CAUTERY FOR SOME NERVOUS DISORDERS.

Dr. T. J. Hutton, in the *Medical Register*, June 18, 1887, reports the successful employment of the actual cautery in a number of troublesome conditions. He speaks of his paper as a contribution to the literature of harsh treatment. One of his patients, aged 45, had within a brief period suffered the loss of husband, children and means. Under this profound shock she sat motionless and dazed, and was apparently drifting into imbecility or cerebral softening. The actual cautery was applied to the spine, and the result was a speedy cure. In the early and middle stages of self-abuse, before the mind becomes besotted and embruted, Dr. Hutton thinks the cautery produces a profound impression on the entire nervous system, and aids in restoring the power of self-control. He obtained good results from the cautery in two such instances. In impotence he had also seen it do good. A man aged 48, who had practised self-abuse when a boy, became impotent. He had quit his home and family, and repeatedly threatened self-destruction. One application of the cautery, supplemented by galvanism, coca, and damiana, restored him to health and home.—*Med. and Surg. Reporter*, June 25, 1887.

## CYNÆCOLOGY AND OBSTETRICS.

UNDER THE CHARGE OF

**WILLIAM H. PARISH, M.D.,**

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### LACERATIONS OF THE PERINEUM, EXTENDING INTO THE RECTUM.

M. Piqué discusses in detail different operative procedures resorted to in lacerations of the perineum through into the rectum. The best efforts of every operator must be directed toward the prevention of the consecutive recto-vaginal fistula, the restoration of the retentive powers of the sphincter ani muscle, and the reformation of the perineum in such a manner as to enable it to retain its integrity through subsequent labors. Prior to the period of antiseptics, efforts were made to avoid a recto-vaginal fistula by means of various autoplasmic procedures; but now, with the aid of antiseptics, greater success is attained by the simpler operations of such early operators as Roux. Yet Roux had six recto-vaginal fistulas to follow his operation. His operation was one of simple denudation with three or four deep perineal sutures, and superficial ones as indicated. Dieffenbach resorted to liberating incisions, believing that the tension of the sutures occasioned the fistula; and Baker Brown stretched the sphincter. These modifications are to-day universally abandoned. Then Langenbeck introduced his flap operation. Langenbeck, after freshening the surfaces of the rent, made a semicircular incision near the vaginal surface of the rent, and raised a narrow flap of twelve millimetres which he secured against the anterior surface of the perineum. He also introduced sutures from the rectal surface and, last, the perineal sutures. He resorted to Dieffenbach's liberating incisions. Le Fort and Demarquay resorted to lateral and anterior flaps at the expense of the mucous membrane, and introduced vaginal, perineal, and rectal sutures.

Professor Richet has practiced with great success an operation that has never heretofore been fully described, and is different from that of Langenbeck. Richet begins by making a curvilinear incision circumscribing the border of the rent next to the vaginal surface. The perineal torn surfaces are now freshened, and the recto-vaginal septum is split by deepening the curvilinear incision referred to. At the apex of the rent this splitting is quite limited, increasing in depth on approaching the perineal surfaces, but not being there more than eight to ten millimetres in depth. He thus elevates two vaginal flaps which are brought together with the raw surfaces in approximation, and are secured by interrupted sutures. The sutures farthest in the vagina are secured before the perineal sutures; but the



vaginal sutures nearest to the integument are not introduced until after the perineal ones. Richet introduces pins in approximating the torn perineum, believing that thus the coaptation is more accurately and more securely effected. Pieces of a bougie are placed over the ends of the pins, and under the bougie carbolized or iodoform gauze. He now secures the last of the vaginal sutures, and introduces superficial interrupted perineal sutures where indicated. He thus uses vaginal and perineal sutures, but does not introduce any from the rectal surface.

Polaillon raises two thick flaps from the torn surfaces of the perineal body, exposing thus the muscular structures of the region, leaves these flaps attached along the vaginal borders of the rent, turns the two flaps into the vagina, approximates their raw surfaces, and secures their coaptation with interrupted sutures. Perineal sutures are now introduced.

Piqué claims that this operation is more difficult than the very simple one of Roux, and does not give any greater success. Verneuil was the first to apply to perineorrhaphy, the American device for vesico-vaginal fistula, viz., the denudation of the vaginal mucous membrane about the rent, and the strict avoidance of the rectal mucous membrane, both in reference to denudation and to suturing. He abraded the vaginal surface about the rent, especially its angle, to the extent of more than one centimetre. He then introduced a vaginal suture, as is done in vesico-vaginal fistule, the first one being placed a little above the rent, the last one at the point to become the new commissure. He then put in three sutures from the integument of different depths, all very near the rectal edge of the rent, but not appearing in the rectum, the deepest passing above the angle of the rent, the most superficial near the anal surface, and a third one of intermediate depth. Verneuil had a large success with this operation, and yet he pronounced in favor of Emmet's operation for laceration into the rectum as being easy of performance and almost absolutely certain of success.

Trélat, after having freshened the torn surfaces, introduced first vaginal sutures of silver wire, about six millimetres apart, but did not secure them until after introducing deep perineal sutures of large and strong silver wire, including a large amount of tissue, using for the purpose a long curved needle continuous with the handle, and with the eye at the point. After passing the ends through an oval plate of lead, he secured them by wrapping them about the plate. Being thus wrapped around the plate enabled him on the day after the operation to lessen the tension if indicated. After the introduction of the perineal sutures, he then secured the vaginal suture by twisting, and imbedded the ends in a cap of diachylum. He also put in superficial perineal sutures, but introduced none per rectum. Trélat claimed

great superiority for his operation, but nevertheless he adopted that of Emmet.

Piqué extracts from the *Dictionnaire Encyclopédique* a description of Emmet's operation for complete laceration, in most respects in accord with the description given by Emmet in the last edition of his book, excepting that the vaginal portion is brought together by sutures introduced from the anterior portion of the perineal surface, and directed obliquely forward, so that after introduction the middle of the sutures are seen on the vaginal surface and the ends are secured on the perineal surface. Piqué gives Emmet's operation high praise, but claims that it is peculiarly well adapted only to complete rents which extend a moderate distance up the septum, and is not adapted to cases of high laceration. The stitch of Emmet, applied next to the anus and encircling the entire rent near the rectum, must pass through so much tissue and so greatly constrict the tissues in drawing downward the septum, that loss of vitality of the thin portion of the septum is liable to occur, and as a result a recto-vaginal fistula follows the operation when the rent is a high one.

In such cases, Richet's operation, described above, is more successful, the upper vaginal sutures so approximating the flaps and the raw surfaces of the septum as to almost certainly avoid a fistula. Still Piqué, apparently without knowing that Emmet does introduce sutures from the vaginal surface, states that were Emmet's operation to include the use of vaginal sutures it would probably suit all cases. He sums up with the statement that where the rent of the recto-vaginal septum is of small extent, recourse must be had to Emmet's procedure; but when the extent of the rent does not permit a sufficient depression of the septum, Emmet's procedure as modified by Trélat or by Richet is alone applicable.

Antiseptics are more necessary to secure union in operation on the vagina than in other localities. The consecutive fistula doubtless has been due, in the past, largely to the absence of antiseptic measures as well as to the method of operation. Still, recent successes must not be attributed solely to antiseptics, and great care must be exercised in the operation itself. The operations of Richet and of Emmet both restore the perineum in such a manner, as to enable it to withstand with some degree of certainty subsequent labors. As to the restoration of the functions of the lower rectum, Emmet's operation is not always successful. For, though his operation aims at bringing the exposed ends of the sphincter muscle together and securing their union, yet the contractile power of these fibres may have been lost by atrophy, etc. Richet's operation is equally as successful in this respect.

Should the operation for complete laceration be performed imme-



diately after the accident, some days after, or later? Ambrose Paré and, later, Dieffenbach advocated immediate operation. Subsequently, many surgeons advocated the postponement of the operation until after the puerperium; but during the past few years the advice of Paré is being again followed. If the contusion is great and the laceration is ragged, with danger of superficial mortification, the operation should be deferred. But such cases are rare. Usually the laceration is simple, shreds can be removed; and the unfavorable effects of the lochia flowing over the parts are done away with by the resort to antiseptics. To the patient, great advantages accrue from the immediate operation. Doléris and others point out that the operation closes the door to septic infection. Extreme exhaustion of the patient would justify delay. According to the advice of Schwartz and Perrier, the operation may be done after the lapse of several days. Freshening may then be effected with a sharp curette. But if the operation is longer delayed, it should not be performed until about three months after the confinement.—*Gaz. des Hôpitaux*, Oct. 22, 1887.

#### LACERATIONS OF THE PERINEUM.

Dr. Perkins, of Londonderry, ascribes as prominent causes of perineal laceration: rapid delivery, a large head, and faulty methods of perineal support. Too much discredit has been cast upon the forceps as a cause of rupture. He gives the following summary of preventive measures:—

1. Pressure upon foetal head to prevent rapid descent. Avoid the use of ergot. Dissuade the patient from making voluntary effort. Place her on the left side.

2. Anæsthetize to relax vulva and perineum. Anoint liberally with belladonna. Perform episiotomy. Draw forward the perineum and anus by hooking the fingers in the anus after the plan of Goodell. Hook the fingers in the posterior commissure and draw backward toward the coccyx with each pain. Judicious use of the forceps is an efficient means of prevention. Ocular examination of the parts after delivery. Immediate operations for repair.—*Medical and Surgical Reporter*, July 2, 1887.

#### VAGINISMUS.

Dr. J. B. Thompson (Corr. Ed.), of Petchaburee, Siam, reports a patient, married, aged 28 years, who suffered from great nervous strain prior to marriage. Coition impossible; hymen thick and tense, with a small aperture. He inserted the finger and ruptured the membrane. Intercourse followed with severe pain, and in twelve months confinement occurred. Two months after labor intercourse was attempted, but was impossible because of intense agony. Examination showed extreme hyperæsthesia, and the slightest touch caused violent and painful contraction of the sphincter vaginæ. There were small piles; no fis-

sure. The remains of the hymen were slightly hypertrophied, but not inflamed; the urethra swollen and granular; no tumors or ulcers; advised clipping off the remains of the hymen and attention to the piles; iron and quinine were given; general condition improved; intercourse became possible, but continued painful. He says: "After an average-sized head has already stretched the vaginal canal, is it possible now to so stretch the parturient canal with fingers or with any device so as to accomplish what parturition seems to have failed to effect? Will Sims' cutting operation give more than a temporary relief?"

[Vaginismus developing after labor is not extremely rare; it is usually dependent upon an ascertainable lesion of the uro-genitalia, or of the rectum, and is remediable by treatment of the causative lesion, by *stretching of the vaginal orifice*, by judicious constitutional measures, and by marital abstinence for a few weeks.—W. H. P.]

#### VAGINISMUS TREATED BY SIMS' OPERATION.

M. Tillaux considers dyspareunia due to vaginismus as being dependent upon vulvar hyperæsthesia, and the vaginismus as secondary to this hyperæsthesia. If only muscular spasm were to be dealt with, dilatation would suffice as a cure; but, he says that this is not sufficient. Hence he practices Sims' cutting operation, followed by dilatation. Tillaux etherizes the patient, stretches with the fingers the vaginal orifice, removes the hymen, and then makes an incision on each side extending from the lateral part of the orifice to the posterior commissure, and running nearly parallel with the sides of the vaginal orifice. He thus makes a V-shaped incision, which severs the nerve filaments surrounding the lower vagina. Then he resorts to dilatation. Iodoform tampons are introduced into the vagina, and cicatrization rapidly follows. One patient thus operated on at the Hôtel Dieu left in one week cured; a second one left in ten days able to bear the introduction of the finger without very great pain. *La. Gaz. de Gynéc.*, in commenting on this communication, says: P. Ménière has done Sims' operation a number of times, and has also tried Broca's operation of crucial incision of the vulvar orifice by means of the red-hot galvano-cautery, and in the most favorable cases has secured only temporary benefit, the vaginismus reappearing in a few months. In essential vaginismus the section of the internal pudic nerve, if unattended with danger and if the method of procedure could be definitely fixed, would be the proper radical remedy; but it would be necessary to remove several millimetres in length of the nerve. Gradual forced dilatation, with the aid of Ménière's dilator, gives equally unfavorable results. Essential vaginismus due to hyperæsthesia is excessively rebellious. It is not the same thing as symptomatic vaginismus.—*Gaz. de Gyn.*, abstracted in *l'Union Med. da Canada*, Jan., 1887.



## PRURITUS VULVÆ.

J. Heitzmann (Corr. Ed.), in discussing pruritus vulvæ, divides the causes into local and constitutional. Among the local causes he enumerates ascarides, decomposition of the vulvar secretions, decomposition of the urine when not expelled with sufficient force, masturbation, catarrh of the vulva, varicose veins, excoriation, fissures, erosions, ulcerations, herpes progenitalis, eczema in its various forms, scars, senile changes in the skin and in the vulva; and finally the pruritus may be a pure neurosis.

Diabetes mellitus is a constitutional cause. Sometimes a considerable swelling of the nymphæ exists, the reduction of which is indicated. Cauterization of the clitoris gives at most only a temporary relief. Pruritus is especially obstinate if a trachoma pudendorum develops itself in the train of gonorrhœal infection. Eczema appears about the vulva in four forms,—the moist, the scaly, *E. pruriginosum*, and *E. marginatum*. The best remedy for the moist form is a powder of zinc oxide and starch,—1 to 10, and later a lead ointment. For the dry, cold, scaly eczema, painting with some preparation of tar is indicated; for *E. pruriginosum*, tar soap, or liquid *oleum fagi*; for *E. marginatum*, spirit sapon. kalini, or sapo viridis.

Removal of moss-like growths on the inner surfaces of the labia only gives temporary benefit, while applications of strong astringents are more useful. The removal of cheloid scars is not of great advantage as a rule, the scar re-establishing itself when excised. For this massage is better.

In the irritation of the senile vulva strong applications of carbolic or salicylic acid are contra-indicated, though generally useful in other forms of pruritus. Better here apply *tnct. rusci* or *spts. vin. gallici*.

Pruritus, when a pure neurosis, without local cause is unfavorable for treatment; but applications of cocaine are of service. When diabetes is the cause, treat chiefly the diabetes: the pruritus will disappear with its disappearance. In pruritus of mild form always examine as to the existence of diabetes.—*Cent. f. d. Ges. Ther.*, Dec. 8, 1887.

## FLAP-SPLITTING.

Mr. Lawson Tait advocated this procedure in 1876, and believes that he was the first one to specifically indicate its availability. Its advantages are especially apparent in fistulas that have been operated on by the denudation process; and where, through this latter process there has been loss of tissue, and also where, through contraction and scarring, further attempts at repair through denudation are, or seem to be, quite hopeless. Flap-splitting would be applicable in the operation for cleft palate, though Mr. Tait has not resorted to it in that operation.

In operating on a fistula the splitting is made more or less parallel to the plane of the two surfaces. Make the incision in the white line of the cicatrix. In the punch-hole vesico-vaginal fistula, this cicatricial line is not median to the planes, but is on the vaginal aspect. Encircle the whole with an incision three-eighths of an inch in depth and turn the bladder mucous surface toward the bladder, and the vaginal toward the vagina. The raw surface is opened like the limbs of the letter Y, and secured together like the flanges of a T-iron girder. The sutures may be introduced as follows: A curved needle with eye at the point is introduced from the vagina a quarter of an inch outside the apex of the Y-shaped division of the flap, and carried around the curve of the separation of the flaps,—not into the bladder,—embracing one-half the fistula, when the point is brought into the vagina. It is now threaded and withdrawn. The same thing is done on the other half of the fistula, and the suture is made to circumvent the fistula. When the suture is secured the flap of the vaginal mucous membrane will front into the vagina, and that of bladder membrane into the bladder, and the broad, raw surfaces are brought together. Tait always uses silver wire. It is generally much easier to insert the sutures by means of the forefinger, guiding the needle without any speculum. The splitting is effected with an ordinary scalpel and a small, sharp hook. Mr. Tait applies the same principle to operations on the perineum. In protrusion of the uterus he extends the perineum from behind forward; in protrusion of the bladder he operates from before backward, making a second and inverted perineum. In each case he makes an artificial shelf.

Of this operation for protruded uterus he speaks with confidence, having cases in which the uterus has been supported for more than ten years. He, for years, has refused to use pessaries in patients connected with the hospital clientèle, because very often patients have come to him, so he states, with pessaries, which he had carefully fitted years before, penetrating into the bladder. For the extension of the perineum forward, he makes with sharp-pointed scissors a horse-shoe incision around the perineum, the horns extending as far forward as seems necessary. It is made deeply into the substance of the labium on each side, and when its flaps are separated it makes a V-shaped groove on each side. Usually, three or four silk-worm-gut sutures are introduced, so as to open out the V completely and evert its lips. The outer flap of each V on the several sides are turned outwards, and the inner inwards; and when the stitches are tightened they are in this way approximated as plane surfaces, and when united they make a very firm and thick platform that rarely gives way. He leaves the stitches in for three or four weeks. For protruded bladder the incision is reversed, the base of it being turned outwards, and being



kept above the opening of the urethra, where there is generally plenty of tissue to permit of the incision; the necessity of support is chiefly at the centre of the vestibule. He does not know whether this operation will stand the test of time; but every other operation he has tried for protrusion of the bladder has failed.

For a tear of the perineum extending into the rectum the principle is the same. The patient on the back, the buttocks are pulled firmly apart so that the cicatrix is put on the stretch. He enters the point at its extreme edge on one side, and keeping strictly to its line, runs through to its other extremity. The incision is about three-eighths of an inch deep, and it forms two flaps,—a rectal and a vaginal. From each end of the incision it is carried forward into each labium for about an inch, and again backward for about a third of an inch. The rectal flap points into the rectum and the vaginal into the vagina, and like an old-fashioned flap-valve they prevent noxious material entering the wound. The resulting mass of perineum is amazingly large, and union is almost inevitable. The only sutures referred to are introduced from the perineal surface, but entered just within the raw surface so as to avoid the skin. Tait has applied the principle of flap-splitting in a large number of cases of exomphalus, in a few cases of inguinal hernia, and in cases of wounds of the bladder and of the intestines.—*British Gynec. Journal*, Nov. 12, 1887.

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## MODERN LIFE AND THE VASORENAL CHANGE.

By J. MILNER FOTHERGILL, M.D.,

Corresponding Editor, London, England.

Is "Chronic Bright's Disease" a malady on the increase at the present time? is a question often asked, and answered in the affirmative. "Is it actually more frequent, or is its increase due to our being better able to detect it?"

To this the answer is "Yes" and "No."

No doubt we are much better able to detect interstitial nephritis than were our predecessors. No doubt a great many diseases are now classed under the heading "Bright's Disease" which hitherto stood alone. But, admitting all this, there seems no doubt about the fact of its increase among us at the present time. The conditions of modern life favor its growth; and some review of this aspect of the subject will give us several results of a practical character.

It has been observed before that there is a distinct history of these cases before the point of "renal inadequacy" is reached. After the case has passed that milestone on its course, its nature is patent to all. But if we are to wait till then before making up our minds, the time for striking effectively has gone, never to return. It has

also been pointed out above that there are various semeia which are ever-present, and by which the hidden thing can be recognized. Of these the most significant is the persistent presence of urates in the urine. They are mainly found with persons of the neurotic or Arab type; and are lacking in massive persons where the changes in the vascular system form our chief guide. It may be broadly said that indigestion, with acidity and flatulence, forms the main complaint of many. The hard brain-worker, with a well-vaulted skull and a small abdomen (containing small viscera), is a very common type. Sometimes he has a little skin eruption somewhere; at other times he is plagued with migraine; or may be it is angina pectoris. He is liable to variations of mood,—one day bright and energetic, another day listless and depressed; uneven in temper later on; given to trying various methods of getting relief. And no wonder! Generally an affectionate husband and parent; commonly a teetotaler, or taking alcohol only in very limited quantities; almost always highly intelligent; usually successful in life. Such men are to be found in hundreds in the towns of the United States of America, where they may be said to flourish and abound; but by no means confined to that area. I suspect these were rare before the days of the printing press, and were usually to be found in the cloister. They commonly have a certain feminine sensitiveness, which is offended by the rude pursuits and practices of other persons. But it is fairly certain that if they did engage in the affairs of life, they wrote their mark. Such a man was not merely the ascetic monk. When he was a man of the world he rose high as a statesman or a diplomatist. “The asthmatic skeleton,” William, Prince of Orange, was a well-grown specimen of this type. His dropsy was of long-standing, and he consulted (anonymously and by letter) the most eminent physicians of Europe after blunt Dr. Radcliffe told him, “I would not have your Majesty’s two legs for your Majesty’s three kingdoms.” And we all know the unceasing toil he inflicted upon himself, and that load of care borne uncomplainingly.

Many of the most energetic of our business men are of this type. They complain of indigestion, which is often gastric and primary from swallowing their food hastily and insufficiently masticated, and suffer from constipation, commonly the result of neglect of their bowels. But, beyond this, there is an acidity in the stomach with flatulence, and the constant presence of lithiates in their water. And this acidity of the stomach is greatly relieved by drinking water as hot as can be sipped,—a matter which stands in a suggestive relationship to the solubility of uric acid in hot water. Beyond their digestive disturbances they furnish other evidences of vasorenal change. Their migraine, asthma, or skin eruptions are suggestive. It is, too, not rare, certainly, to find in such a man a tight artery and a large heart



with loud valve sounds. He forms, indeed, a clinical picture familiar to most physicians of experience. He is a small eater, and always is made worse by any attempt to feed him up by quantities of animal food. Such attempts only further embarrass his liver, and drive it down more and more to the uric acid formation. In treating him medically alkalies as a rule are too depressant for him.

Such a man is on the increase at the present time, and is likely to become more frequent in the future with the growth of large towns. Neither by physique or temperament is he suited to a country life, where all is so largely dependent on the weather. This is too uncertain for him. He craves an occupation where his elaborate calculations are not at the mercy of so capricious an element. He prefers brain toil to manual labor and the toil of the fields. So he enters a town and lives a town life,—which is defective as to oxygen, if not as to exercise. Sooner or later, usually, he suffers from two outcomes of hard brain-toil, viz., Bright's disease and diabetes. The liver is affected by hard, persistent mental labor or worry; and this seems more apt to happen when the individual is undemonstrative and does not manifest outward emotion, but keeps his troubles to himself. Such an individual eased his mind to the writer one day. His liver was at fault. After some conversation he delivered himself in firm tones as follows: "I do believe if I could stamp and swear when put out, I should not be so bothered with my liver." And the more the matter is considered the more one feels inclined to agree with him. Such a man has a small abdomen and viscera, small anatomically as well as functionally; and the life he leads and the food he eats, largely animal food, handicap these viscera still further; with the consequence that the liver fails either as to its glycogenic function, or in the matter of the metabolism of albuminoids, reverting as regards albumen-metamorphosis to the early primitive uric acid formation. This is not the mere creation of a vivid imagination, but is founded on solid clinical facts. What say the Insurance Companies of the United States of America as to the rate of increase of deaths from Bright's disease and diabetes in that country of hard brain-workers? How is it that a Jewish physician came to me, after reading an article of mine in the *Lancet*, entitled "The Genesis of Bright's Disease," to tell me how common Bright's disease and diabetes are among the male members of his community? Or, that a physician who had spent many years in Hindostan, on hearing me speak of this, informed me how common was diabetes amidst male Bengalees (whose dietary preserves them from Bright's disease)? Here are three people greatly addicted to brain-work, and having no likeness to each other in any other respect, all manifesting the same tendency to diseases in which the liver is at fault. It may be a coincidence; but that is not the explanation to thinking minds.

"The fathers have eaten sour grapes and the children's teeth are set on edge," it is written. And what sort of folk are the offspring of such men, especially when reared in cities? They resemble the father, "only a little more so;" in other words the neurotic temperament is intensified. The sons are lighter usually, and ere long have some nervous trouble, asthma or indigestion, and biliousness; and still more those awful inward sensations which are, apparently, produced by liver products, or may be, as Dr. Lauder Brunton suggests, produced by the later digestion and escaping from the liver find their way into the general circulation and poison the brain. The son of a hard-working father, and himself hard at work in early years, while still a young man, has to give up business and seek in travel and variety some relief from horrible sensations which embitter his existence and tempt him sorely to take his own life. He has a predilection for the physician's consulting room where his story is always interesting, and often instructive as to the evil results of long-sustained overwork.

But how about the daughter of the hard-working father; does she possess any characteristic features? There is no difficulty about the answer to this question: she is a typical "neurotic." Her petite figure, her quick wits, her engaging disposition, and her bird-like walk all mark her out from the rest of womankind. Writers of fiction have depicted her again and again, as the small, active, spinster aunt, the good angel of the families of her brothers and sisters. Why has she remained a spinster? That is her own secret. How comes she amidst, or commonly at the end of, a large family stalwart and robust? The answer to that has yet to be forthcoming. There she is; and a very interesting object she is, too! Bright, vivacious and high-spirited, her story is as follows: She has migraine, which she calls "faceache" or "neuralgia," with pain and tension in the eye, often accompanied by sparks or stars, and frequently ending in vomiting. (The association of migraine with gout was clearly recognized by Sir Henry Holland.) She has attacks of palpitation; and, what is worse to bear and far more alarming, she has attacks of failure of the heart's action resembling syncope, but unfortunately too rarely accompanied by loss of consciousness, and her feelings are something terrible, while the eye mutely begs for help. She has indigestion, with acidity and flatulence often alternating, the latter being very troublesome; and is usually more or less constipated. Her urine is sometimes copious and pale; but as a rule it is laden with lithates. When the migraine is on, the call to make water is incessant, and the bulk of urine passed is large. As to her reproductive organs, they are imperfectly developed, the uterus being small and more or less infantile; while the ovaries are irritable and tender. Frequently the sexual



passion is feeble, and sometimes entirely wanting. Some are too imperfectly developed to conceive. Others are capable of being impregnated, but never can go to the full time. Some have one or two delicate children which almost certainly succumb to the diseases of childhood. Some are highly erotic, and are either markedly incontinent or practise cheirogamy. But as a rule the neurotic is chaste in thought and deed; and, however, charming as a woman, does not occupy a first place as wife and mother. She frequently complains of rheumatism, especially in the shoulder, from a tendency to get the arms out from under the bedclothes and lay them over the head. Commonly she cannot swallow a pill. Her friends prescribe her as "all up and down." One day the life of the party, and the next day is in bed with a darkened room, suffering from her "faceache." Any chink of light will disturb her, even when her eyes are closed. Her hearing is preternaturally acute, and the slightest noise is offensive. She wishes to be left alone, and it is agony to her to have to endure a visit from some good-natured gossip. When the attack is over she feels exhausted, and either craves for some tasty food, or goes off to sleep. Sometimes she will have a bad headache in the morning, and improve during the day till she is well enough to go to the theatre at night. Querulous and fastidious about trifles, she carries herself well in emergencies, and does not lose her presence of mind at times of imminent danger. She is particular about her dress, and objects to the slightest particle of dirt. As to her food, she is dainty, is fond of tasty things, and, as a rule, is not partial to milk-puddings, but prefers sandwiches of some sapid meat on thin bread and butter, served up neatly. She is indeed a charming, winsome little lady; but a very difficult patient to treat satisfactorily. Medicine she will take, and in her bedroom there is usually an array of medicine bottles; but she is difficult to deal with as to her dietary. She will get anything for anybody else; but dislikes the idea of having anything specially prepared for herself. She is a neat, particular creature in her ways; her bed-room is always trim, and, catch her when you please, her wardrobe is always in exquisite order. The migrainous neurotic in the stalwart country family reminds one of a harebell in an onion bed. In town families sometimes every child is a neurotic.

And what is her child—when she has one. Once more it is a case of "the same, only rather more so." It is a bundle of nerves, with shrunken viscera. It possesses a very imperfect liver, which kindly Dame Nature protects by a delicate stomach, a dainty palate, and a very small appetite. She picks at her food rather than eats. She is a spirituelle little creature. Lively, precocious, good, of warm sympathies, she is a perfect little fairy—the delight of all; "too good for this world," her nurse remarks, shaking her head; and soon the bright light is extinguished by some of the maladies of childhood, or by tubercular meningitis.

The neurotic girl is the child who feels most keenly the burden of modern education. A quick, precocious child, she has never to be spurred at her lessons; she is, indeed, only too fond of her book. This is all very well in childhood; but when the time of puberty arrives, the education is often carried on at the expense of the bodily functions, and the pubertal change is thwarted, and the girl grows up a blighted woman. When she is married, and the reproductive organs are put to their functional purpose, their imperfection reveals itself; and the aid of the gynæcologist becomes indispensable. In other cases the arrest in the development of the reproductive organs is complete, and the girl remains and lives a sexless social unit, without any physiological aspirations to be gratified by marriage. Betwixt the healthy country neurotic, who is at times the prolific mother of a large family, and the blighted, sexless, town-bred neurotic there is a wide space, covered by numerous blends; but there is a family likeness running through all.

Any one disposed to study the varieties of the neurotic will find three carefully depicted in George Eliot's well-known novel, "*Adam Bede*." There is Mrs. Poyser, "a good-looking woman of eight and thirty, of fair complexion and sandy hair, well shaped, and light-footed," while "her tongue was not less keen than her eye." Quick-witted and active, she was liable to recurrent inflammation in her side, which may have been pleurisy, but possibly was intercostal neuralgia. Then there was her niece, Dinah Morris, so like her aunt Judith, only her aunt "was stouter and broader." Dinah, the earnest preacher who had no thought for herself, and of whom Mr. Poyser complained, "I think you're like the birds o' the air, and live nobody knows how." And when wishing to leave the house of her aunt, that worthy explained: "She says the country is too comfortable, and there's too much to eat." Dinah was a more pronounced neurotic than her aunt. Then there is Mr. Irwine's sister Anne, confined to a darkened room with severe headache, in all probability migraine. When her brother came into the room, shoeless Miss Kate, "a thin, middle-aged lady," whispered to him, "Don't speak to her, she can't bear to be spoken to to-day," as she lay with "her eyes closed, and her brow contracted as if with intense pain."

And even a busy medical man might do worse than read "*Adam Bede*," if he wishes to study the modern tendency of disease, and the neurotic direction in which the race is moving, especially as regards its town-dwellers. From all this we can see that the matter of the vasorenal change resting upon the reversion of the liver to the primitive uric acid formation,—and marching upon lines mapped out in the primitive layers of the embryo,—at once widens the grasp as to practical pathology, while it tightens the grip as to our clinical acquaintance with the individual.



## **GENERAL REVIEW OF THE STATICS OF THE NORMAL PELVIS; COMBINED OPERATIONS FOR THE RELIEF OF UTERINE DEVIATIONS OR DISPLACEMENTS.\***

**By L. DOLÉRIS, M.D.,**

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IN the female who has reached the period of activity of the genital organs, the state of equilibrium, as regards the sexual organs themselves and in their relations with the surrounding organs, depends upon various conditions easy of elucidation by experimental means.

Abdominal pressure is exerted in a minimum degree in woman, and has but little bearing upon the pelvic axis, owing, first, to the superior costo-respiratory type, which diminishes the necessity of counter weight produced by the resistance of the intestinal mass; and, second, to the obliquity of the pelvis, which is sufficiently accentuated to cause the vertical axis, which we may regard as the axis resulting from the pressure, to rest a little posterior to the bladder and to the body of the uterus. There results the fact that the entirety of the pressure is brought to bear upon Douglas' pouch, after having broken itself upon the irregular planes which succeed each other from the abdomen to the pelvic floor. As regards the *uterus* itself, it is to be observed that it is subjected to the direct action of pressure which might cause it to deviate or to fall.

1st. Because it is closely connected with the bladder, from which it does not become separated. The latter rests upon or sustains it, according to its state of fullness or emptiness. There is but a very small depression between the bladder and the uterus in which the intestines cannot become lodged. It follows that the intestinal mass slides upon the abdominal pelvic wall, formed in part by the top of the bladder, suspended from (bouraque), and by the top of the uterus resting against it. The intestines slide upon it as upon an inclined plane, the pressure is oblique, and is, consequently, almost annulled. The weight thus comes to rest upon the muscular structures of the pelvis, the resistance of which is considerable. This resistance is secured by the integrity of the perineo-pelvic muscular system, extending from the levator ani to the subcutaneous layer. It is also supported by the unity of the walls of the vagina, being secured through the virtual occlusion of the vaginal canal. As regards the position of the uterus, it depends upon the integrity of its shape and

\* Read in abstract before the American Gynæcological Association, Session 1887.

of its structure, which permits the regular action of the ligaments, and upon the more or less normal resistance of the latter.

It is, therefore, in this trilogy, *uterus, ligaments, and muscular system of the pelvis*, that the key to the state of normal pelvic equilibrium is found.

When one or more of these three elements are modified, there necessarily results a deviation. Without insisting further upon this point, I would call to mind that the state of atony of the ligaments, their paralyse of inflammatory origin, their contraction, etc., on the one hand, the atrophy and weakening of the middle segment of the uterus, the deep lacerations of the cervix which reach the supra-vaginal segment, and even the pelvic muscular body itself, on the other, as well as the exaggerated contractions or distensions of the vaginal walls, and of the *cul-de-sac*, the perineal ruptures, without mentioning the structural changes resulting from inflammatory or other neoplasms of the pelvis, are the principal causes of displacements of the uterus and of loss of pelvic equilibrium.

A therapeutic law which impresses itself upon the mind, if we accept these prémisses, is the necessity of bringing all of these organs to their normal state, by the mechanical or other means necessary to secure this result. The indications are:—

- 1st. To restore the form and the structure of the uterus.
- 2d. To restore the ligaments to the condition of acting efficiently.
- 3d. To restore to the muscular body of the pelvis its resisting powers.

The latter becomes a necessary measure, without which all intervention would be but palliative, of only apparent effect, and, consequently, insufficient.

If, after any operative measures, we do not find a uterus normal in volume and in structure, that is to say, pliable, but a rigid body, and without flexibility from the fundus of the organ to the os tinæ, if the bladder, which should sustain and protect it is not itself sustained by the pelvic floor, if the anterior or the round ligaments do not have the exact length necessary, and sufficient tone to insure proper interaction between the bladder and the womb, it may be believed the static conditions remain imperfect, and the majority of the symptoms and inconveniences of the former abnormal state will persist.

The experience of several years has proved to me the futility of the majority of those operations which have not aimed at obtaining the *triple result*, when this was indicated. Most of the plastic operations may relieve the patients, but the best of them sometimes only act as temporary expedients in the same manner as does the pessary.

I shall now review the abnormal conditions, from the simple to the composite, and shall give an abstract of cases observed which justify my opinion.



*Retroversion.*—This may be simple or combined with prolapsus, retroflexion, or with traumatism of the neck.

1st. Simple, it is nearly always of parametric inflammatory origin, with posterior or postero-lateral adhesions.

2d. If there is flexion at the same time, there is every chance of finding a material alteration of the middle segments of the uterus, of *endo-* or *para-metric* origin.

3d. If there co-exists a lowering of the pelvic floor, it is generally accessory or accidental. This is only one of the etiological factors of prolapsus. Any cause which displaces the direction of the abdominal pressure (abdominal belts, special muscular efforts, or habitual attitudes, etc.), or any cause which primarily displaces the uterus posteriorly, such as tumor, adhesion, or flexion, will insure the permanence of the posterior deviation. This deviation is even an advantage in women leading quiet, and sedentary lives, as thus it retards the progress of prolapsus. The flexed uterus does not descend. In the case of women, on the contrary, who lead a laborious life, the retroversion and the prolapsus are accentuated at the same time. There results a rectocele of the worst form. I do not here dwell upon this fact, which I have elsewhere specially studied, and which is often a cause of erroneous diagnosis in practice.

4th. Finally, if the retroversion is the result of a loss of resistance presented by a deeply lacerated uterus, occurring in the course of confinement, it is clear, that as long as the ligaments which hold it have not regained the centre of greatest solidity, that is, the point of mutual attachment, where their common action meets, in other words, as long as the cervical segment of the uterus is lacerated or displaced, the proper action of the ligaments will not exist. The womb, forced to depend upon the corpus or even the fundus, will feel the effects of the least pressure. Most frequently it will be turned over posteriorly.

Let us now review these various alternatives.

#### A.—SIMPLE RETROVERSION.

In this case the indication is to formally act upon the deviated uterus, and to replace it in its normal position. When ordinary means have failed, the shortening of the round ligaments, whether adhesions exist or not, is to be resorted to.

As, naturally, the prolonged vicious position of the uterus maintains a pathological state of the mucous membrane and occasionally of the muscles, the operative plan is as follows:—

1st. Mechanical straightening of the uterus by means of the hands and of the sound, rupture of the adhesions, maintenance of the womb by appropriate means.

2d. Scraping and treatment of the endometrium.

(TO BE CONTINUED.)

## PUBLISHER'S DEPARTMENT.

EDITED BY

A. L. HUMMEL, M.D.

### THE BEST NATURAL PURGATIVE WATER.

Sir Morell Mackenzie, M.D., in speaking of natural mineral waters, gives as his opinion that "the best which exists" is the Rubinat-Condal Water, which issues from a spring at a high altitude in the Pyrenees, in Spain.

The attention of the Spanish Government being drawn to the spring through the remarkable cures effected by its water, a careful official investigation was made, and, as the result, a Royal Decree was published on the 13th of June, 1885, declaring the Rubinat-Condal Water to be "of Public Utility,"—*an almost unprecedented recognition*. This we believe is the *only* mineral water that has ever been endorsed by the Spanish Government.

The promulgation of this decree carried the reputation of the water to every part of Europe, and its fame soon reached this country, where it is now being offered to the profession in an undeteriorated condition (it being bottled at the springs in its natural state) by the Rubinat Co., of No. 80 Beaver St., New York City. It is admitted into this country free of duty,—a fact which proves it to be a true natural mineral water. Its great popularity is owing to its palatability and efficiency. It is much more pleasant to the taste than Hunyadi-Janos and other purgative waters; is much more efficient because of its richness in sulphate of soda, the action of which is mild, and to its paucity in the sulphate of magnesia, the action of which is violent and painful.

The following analysis by Dr. Don José Canudas y Salada (official chemist of the City of Barcelona and Professor of Chemistry in the Barcelona University) shows this superior feature of the water:—

In a litre (2.113 pints) of Rubinat-Condal Water:—

Sulphate of soda	.	.	.	.	.	93.230 grammes.
Sulphate of magnesia	.	.	.	.	.	3.172 "
Sulphate of potash	.	.	.	.	.	0.228 "
Sulphate of lime	.	.	.	.	.	1.887 "
Chloride of sodium	.	.	.	.	.	1.990 "
Silica, alumina, ferric oxide	.	.	.	.	.	0.036 "
Loss	.	.	.	.	.	0.017 "

Total saline matter . . . . 100.560 grammes.

The remarkable proportions of the sulphates here shown would seem to render this water superior to any other aperient water known.

On examination of the following comparative table it will be seen that the "Rubinat-Condal" possesses over four times the strength in the sulphate of soda of any other purgative water in the world, and contains less than one-half of the quantity of sulphate of magnesia found in that water heretofore regarded as possessing the least.



ONE LITRE OF WATER.

	Sulphate of Soda.	Sulphate of Magnesia.
Seidlitz . . .	5.10 grammes.	20.80 grammes.
Friedrichshall . .	7.33 "	6.70 "
Pullna . . .	10.76 "	12.61 "
Æsculap . . .	20.31 "	29.80 "
Rokoczy . . .	20.52 "	25.03 "
Hunyadi-Janos . .	22.85 "	22.35 "
RUBINAT-CONDAL	93.23 "	3.17 "

No change of diet or habits is necessary while using it. As a purgative its effect may be made mild or energetic at pleasure. It has also proven itself a powerful solvent and of very great utility in the treatment of diseases of the kidneys and bladder. It exerts also a very beneficial effect on the mucous membranes generally, and comes highly recommended for the treatment of catarrh of the air-passages, stomach, or biliary tract. In all forms of skin-disease it is a valuable adjunct, and is especially useful in the treatment of all gouty disorders and rheumatism. Those of our readers who have felt the need of a palatable and efficient laxative or cathartic for routine use in their practice would do well to write the Rubinat Co. for a bottle of this water, saying they act on the advice of this journal. A full-sized bottle will be sent to any physician free.

IRON AS A TONIC.

Iron, says *Le Progrès Médicale*, is one of the most important principles of the organism, and the only metal the presence of which is indispensable to the maintenance of life. It exists in all parts of the system, but nowhere does it acquire such importance as in the blood. The blood of a person in good condition contains about forty-five grains of iron. When this amount is diminished a decline takes place: the appetite fails, the strength is enfeebled, and the blood loses its fine natural color and quality. In a great number of diseases, such as anæmia, chlorosis, hemorrhages, debility, etc., it sometimes happens that the blood has lost half its iron; and to cure these diseases it is absolutely necessary to restore to the blood the iron which it lacks. The problem has been to find a preparation of iron in the proper form for penetrating the organism without unduly tasking the digestive tract or interfering with the essential qualities of the gastric juice. A preparation containing iron in such a state is scientifically prepared by Wm. R. Warner & Co., under the name of Pil. Chalybeate. It is prepared in such a way that Carbonate of Potash and Sulphate of Iron are compounded so that they do not combine until they are taken into the stomach; there the reaction takes place, and the Proto-Carbonate of Iron (Ferrous Carbonate) is formed without any excess of air, thus forming a salt which is quickly assimilated, and the therapy of the preparation is soon shown by its effects. It will be found in taking these Pills that neither constipation nor other ill effects will result from their use. It has been proven in clinical practice that in cases of Chloro-anæmia the Pil. Chalybeate, as prepared by Wm. R. Warner & Co., will regenerate the red globules of the blood with a rapidity not before observed under the use of any other ferruginous preparation, it

adding to their physiological power and making them richer in coloring matter. Moreover, being neither styptic nor caustic (as just enough Carbonate of Potash and Sulphate of Iron are used to neutralize each other and form nothing but Carbonate of Iron and a small quantity of Sulphate of Potash), and having no coagulating nor astringent action on the gastro-intestinal mucous membrane, the Pil. Chalybeate of Wm. R. Warner & Co. can cause no deleterious effects to the patient. At the same time the therapeutic effects are rapid and energetic, and do not give rise to the sensation of weight in the stomach or the gastric pain and indigestion occasioned by other preparations of iron. When a more tonic effect is desired the same combination as Pil. Chalybeate can be obtained with one-sixth of a grain Ext. Nux Vomica added under the name of Pil. Chalybeate Comp. (Warner & Co.), thereby increasing the tonic effect and giving renewed strength to the patient.

The above results can be proven by a trial of one bottle of the above Pills, a sample of which will be mailed to physicians upon request.—*Medical Brief*, January, 1888.

#### THE BEST TONIC.

For convalescents, especially females, and for all patients suffering from enfeebled digestion, a mild tonic stimulant—one that contains just enough alcohol to stimulate the gastric follicles, and is at the same time nutritious in itself—would seem a most desirable remedy for routine use in every physician's practice, provided such a remedy is palatable enough to insure its continued use, and cheap enough to make it available for all classes of patients.

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A trial will convince as to its palatability and price, and the certificate of analysis by Prof. E. G. Love, of New York City, seems to give unquestionable evidence of its therapeutic value; and it only remains for this new remedy to endure the crucial test of clinical experimentation to take its place among the many really valuable proprietary remedies now so extensively prescribed by the profession.

The following is the analysis referred to:—

"Specific gravity at 60° F.	. . . . .	1.0262 per ct.
Total solid matter . . . . .	. . . . .	8.510 "
Alcohol by weight . . . . .	. . . . .	4.714 "
Maltose . . . . .	. . . . .	2.983 "
Dextrin . . . . .	. . . . .	3.543 "
Nitrogen . . . . .	. . . . .	0.097 "
Equivalent to—		
Albuminoids . . . . .	. . . . .	0.618 "
Glycerine . . . . .	. . . . .	0.215 "
Hop ext., coloring matter, etc.	. . . . .	0.930 "
Acetic acid . . . . .	. . . . .	0.057 "
Lactic and succinic acids . . . . .	. . . . .	0.116 "
Ash . . . . .	. . . . .	0.225 "

From *The Medical Bulletin*.—E. G. LOVE, Ph.D."





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The dose of Pil: Chalybeate is from 1 to 4 at meal times, and is recommended and successfully used in the treatment of Pulmonary Phthisis or Consumption, Anæmia and Chlorosis, Caries and Scrofulous Abscesses, Chronic Discharges, Dyspepsia, Loss of Appetite, etc.

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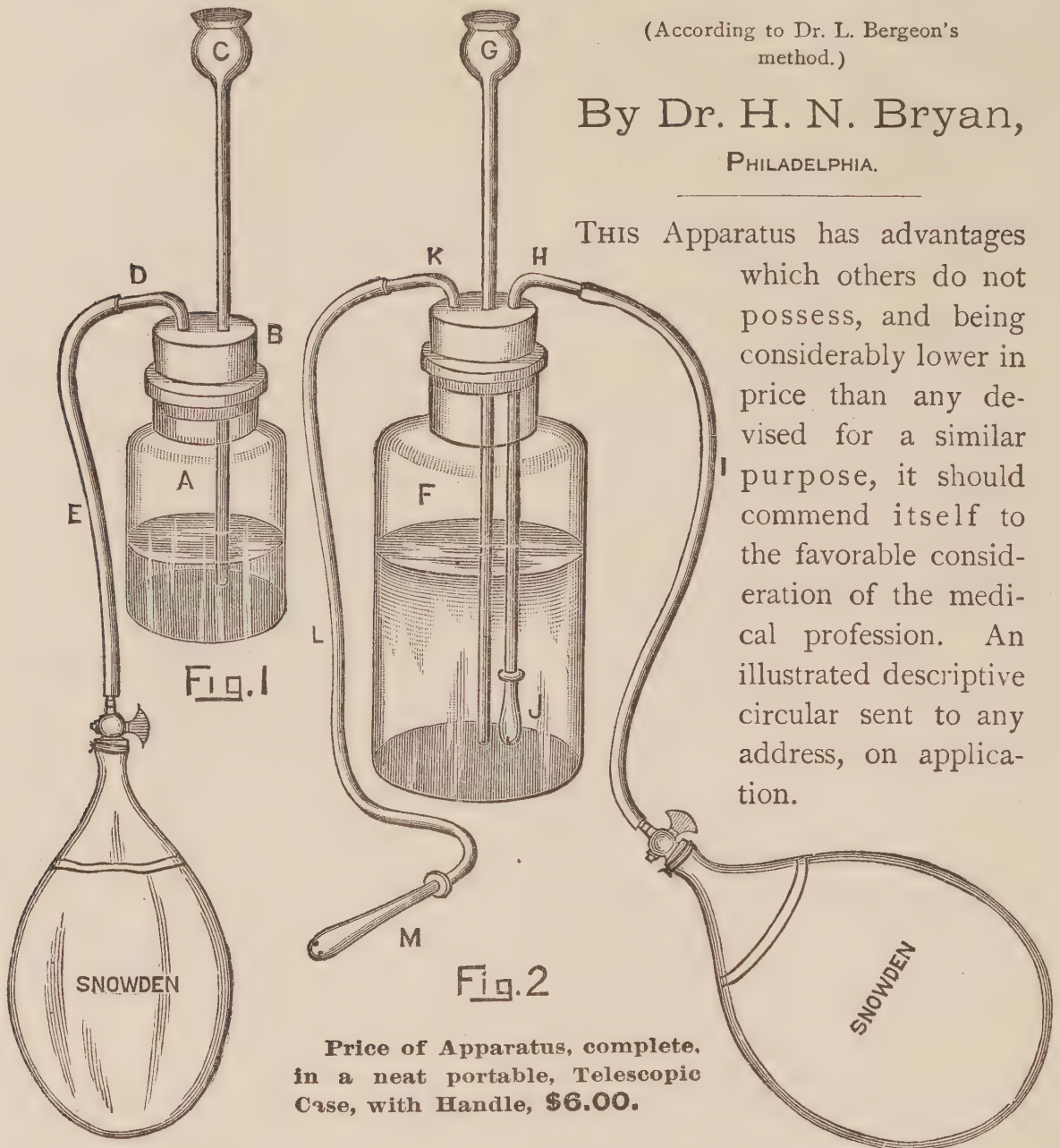
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SULPHATE OF MAGNESIA .....	3.172	"
CHLORIDE OF SODIUM .....	1.990	"
Sulphate of Potash .....	0.228	"
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